	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 16:23:16 ON 26 OCT 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 25 OCT 2004 HIGHEST RN 769101-30-6
DICTIONARY FILE UPDATES: 25 OCT 2004 HIGHEST RN 769101-30-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

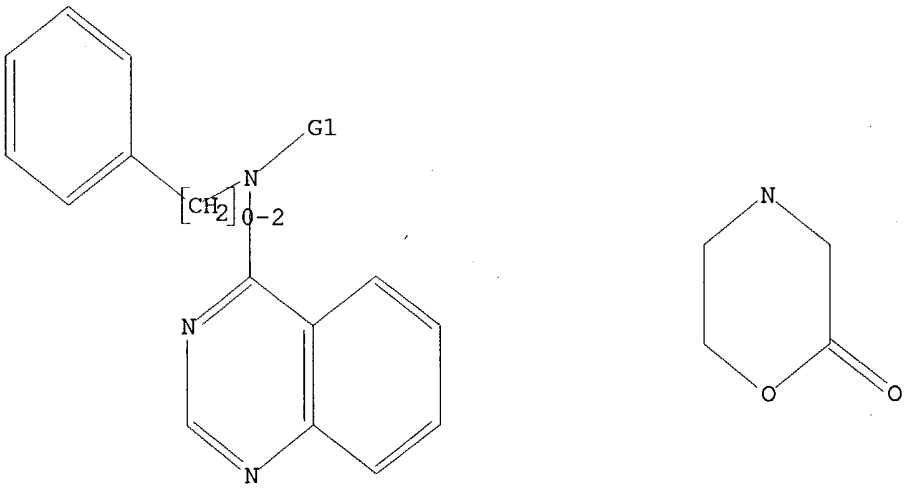
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
Uploading C:\Program Files\Stnexp\Queries\938235.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



G1 H,Me,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu

Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss full

FULL SEARCH INITIATED 16:23:46 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 142 TO ITERATE

100.0% PROCESSED 142 ITERATIONS 119 ANSWERS
SEARCH TIME: 00.00.01

L2 119 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 155.42 155.63

FILE 'CAPLUS' ENTERED AT 16:23:53 ON 26 OCT 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 26 Oct 2004 VOL 141 ISS 18
FILE LAST UPDATED: 25 Oct 2004 (20041025/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l2
L3 13 L2

=> d l3 1-13 ibib abs hitstr

L3 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:60252 CAPLUS
DOCUMENT NUMBER: 140:128427
TITLE: Preparation of quinazolines as ephrin and EGFR receptor kinase modulators for treating cancer and other disorders
INVENTOR(S): Rice, Kenneth D.; Anand, Neel Kumar; Bussenius, Joerg; Costanzo, Simona; Kennedy, Abigail R.; Kim, Angie I.; Peto, Csaba J.; Tsang, Tsze H.; Blazey, Charles M.
PATENT ASSIGNEE(S): Exelixis, Inc., USA
SOURCE: PCT Int. Appl., 266 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

Date not good

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2004006846 A2 20040122 WO 2003-US21923 20030714
WO 2004006846 A3 20040715
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2002-396269P P 20020715
US 2003-447212P P 20030213
OTHER SOURCE(S): MARPAT 140:128427
GI

no nonprovisionals yet

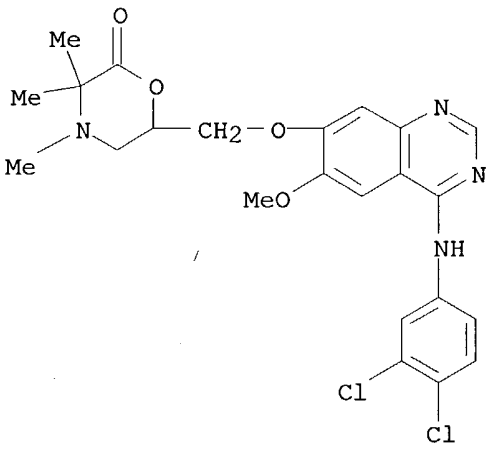
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The present invention provides quinazolines (shown as I; variables defined below; e.g. II and III) for modulating receptor tyrosine kinase activity, particularly ephrin and EGFR, and methods of treating diseases mediated by receptor kinase activity using the compds. and pharmaceutical compns. thereof. Diseases mediated by receptor kinase activity include, but are not limited to, diseases characterized in part by abnormal levels of cell proliferation (i.e. tumor growth), programmed cell death (apoptosis), cell migration and invasion and angiogenesis associated with tumor growth. Compds. of the invention include 'spectrum selective' kinase modulators, compds. that inhibit, regulate and/or modulate signal transduction across subfamilies of receptor-type tyrosine kinases, including ephrin and EGFR. Inhibitory activities for >200 examples of I are tabulated for some or all of EphB4, EphA2, KDR, Flt-1, EGFR and ErbB2 kinases. Although the methods of preparation are not claimed, 37 example prepns. are included. For example, 1,4:3,6-dianhydro-2-O-[4-[(3-chloro-2-methylphenyl)amino]-6-(methyloxy)quinazolin-7-yl]-5-O-methyl-L-iditol hydrochloride was prepared in 2 steps (94, 51 % yields, resp.) starting with mesylation of 1,4:3,6-dianhydro-2-O-methyl-D-glucitol followed by ether formation of the intermediate 1,4:3,6-dianhydro-2-O-methyl-5-O-(methylsulfonyl)-D-glucitol with 4-[(3,4-dichlorophenyl)amino]-6-(methyloxy)quinazolin-7-ol; the quinazolinol was prepared in 64 % yield from 4-chloro-6-(methyloxy)-7-[(phenylmethyl)oxy]quinazoline hydrochloride and 3,4-dichloroaniline. For I: R1 is C1-C3 (un)substituted alkyl; R2 = H, halogen, trihalomethyl, CN, NH2, NO2, OR3, N(R3)R4, S(O)0-2R4, SO2N(R3)R4, CO2R3, C(O)N(R3)R4, N(R3)SO2R4, N(R3)C(O)R3, N(R3)CO2R4, C(O)R3, (un)substituted lower alkyl, (un)substituted lower alkenyl, and (un)substituted lower alkynyl; R3 is H or R4; R4 = (un)substituted lower alkyl, (un)substituted aryl, (un)substituted lower arylalkyl, (un)substituted heterocyclyl, and (un)substituted lower heterocyclylalkyl; or R3 and R4, when taken together with a common N to which they are attached, form an (un)substituted 5-7-membered heterocyclyl, said (un)substituted five-to seven-membered heterocyclyl optionally containing at least one addnl. heteroatom = N, O, S, and P. Q is 0-5; Z = OCH2, O, S(O)0-2, N(R5)CH2, and NR5; R5 is -H or (un)substituted lower alkyl; M1 is H, (un)substituted C1-C8 alkyl-L2-L1, G(CH2)0-3, or R53(R54)N(CH2)0-3; wherein G is a saturated 5-7-membered heterocyclyl containing 1-2 annular heteroatoms; L1 is C:O or SO2; L2 is a direct bond, O, or NH; M2 is a saturated or mono- or polyunsatd. C3-C14 mono-

or fused-polycyclic hydrocarbyl optionally containing 1-3 annular heteroatoms per ring; M3 is NR9, O, or absent; M4 is CH2, CH2CH2, CH2CH2CH2, or absent; addnl. details are given in the claims.

IT **650582-58-4P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of quinazolines as ephrin and EGFR receptor kinase modulators for treating cancer and other disorders)

RN 650582-58-4 CAPLUS
CN 2-Morpholinone, 6-[[[4-[(3,4-dichlorophenyl)amino]-6-methoxy-7-quinazolinyl]oxy]methyl]-3,3,4-trimethyl- (9CI) (CA INDEX NAME)



L3 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:41317 CAPLUS
DOCUMENT NUMBER: 140:99649
TITLE: Pharmaceutical compositions for the treatment of respiratory tract diseases comprising novel anticholinergic agents and inhibitors of EGFR-kinase
INVENTOR(S): Pairet, Michel; Meade, Christopher John Montague; Pieper, Michael P.
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Gmbh & Co. Kg, Germany
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

assigned complex compositions

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004004775	A1	20040115	WO 2003-EP6788	20030626

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,

CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 10230751	A1	20040122	DE 2002-10230751		20020709
US 2004048887	A1	20040311	US 2003-614382		20030707
PRIORITY APPLN. INFO.:			DE 2002-10230751	A	20020709
			US 2002-407746P	P	20020903

OTHER SOURCE(S): MARPAT 140:99649

AB The invention relates to novel pharmaceutical compns. comprising novel anticholinergic agents and EGFR-kinase inhibitors, method for production and use thereof in the treatment of respiratory diseases. The synthesis of several EGFR-kinase inhibitors is given. Thus an inhalation capsule contained (microgram/capsule): 2,2-Diphenylpropionic acid scopine ester methobromide 60; EGFR kinase inhibitor 3500; lactose,3440.

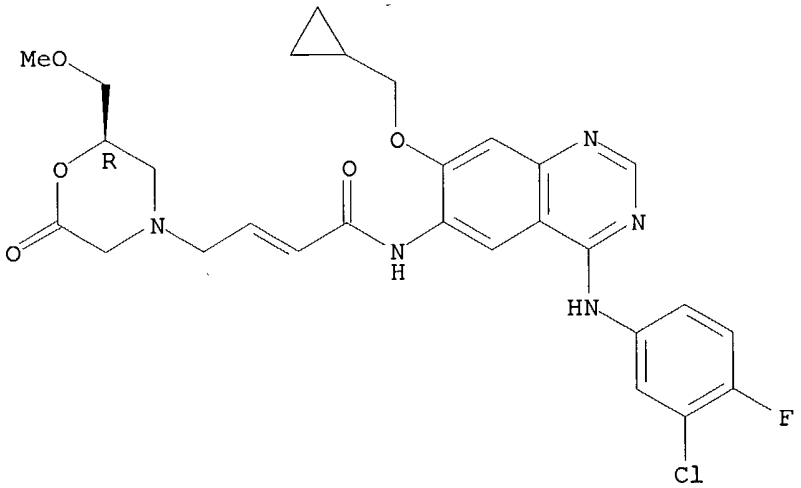
IT **402569-98-6P 402724-01-0P 402724-11-2P 402724-17-8P 402724-18-9P 402734-65-0P 402735-03-9P 402855-52-1P 402855-53-2P 402855-58-7P**

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(pharmaceutical compns. for treatment of respiratory tract diseases comprising anticholinergic agents and inhibitors of EGFR-kinase)

RN 402569-98-6 CAPLUS

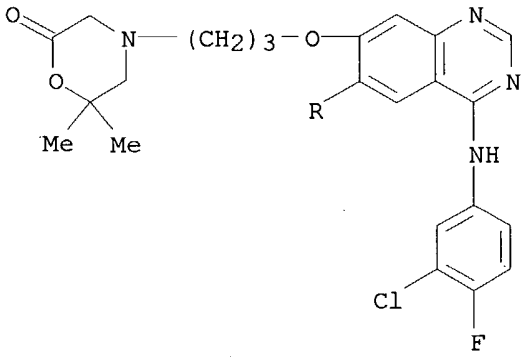
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

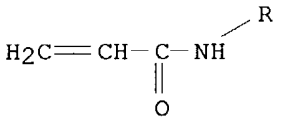
Absolute stereochemistry.
Double bond geometry unknown.



RN 402724-01-0 CAPLUS

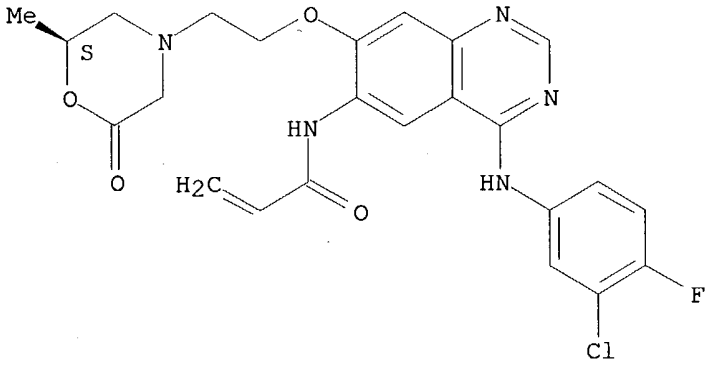
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[3-(2,2-dimethyl-6-oxo-4-morpholinyl)propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)





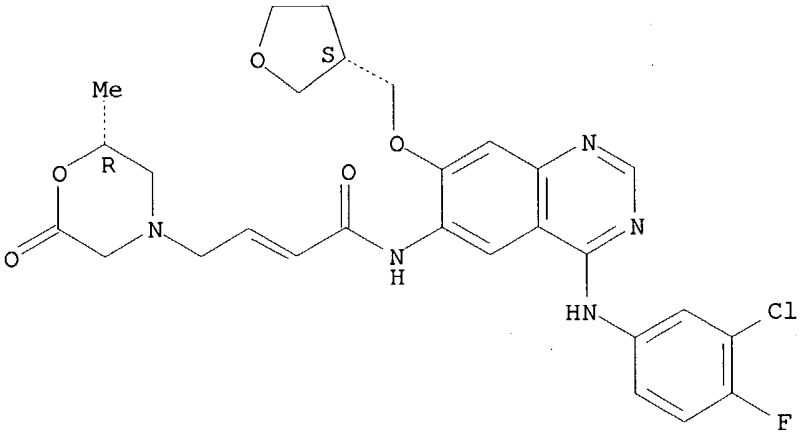
RN 402724-11-2 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[2-[(2S)-2-methyl-6-oxo-4-morpholinyl]ethoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 402724-17-8 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[4-[(2R)-2-methyl-6-oxo-4-morpholinyl]butoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:656610 CAPLUS
DOCUMENT NUMBER: 139:202486
TITLE: Inhalants containing anticholinergic agents and EGFR kinase inhibitors
INVENTOR(S): Jung, Birgit; Pairet, Michel; Pieper, Michael P.
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

assignee complex compositions

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003068264	A1	20030821	WO 2003-EP1357	20030212
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10206505	A1	20030828	DE 2002-10206505	20020216
US 2003158196	A1	20030821	US 2003-360064	20030207
PRIORITY APPLN. INFO.:			DE 2002-10206505 A	20020216
			US 2002-369213P P	20020401

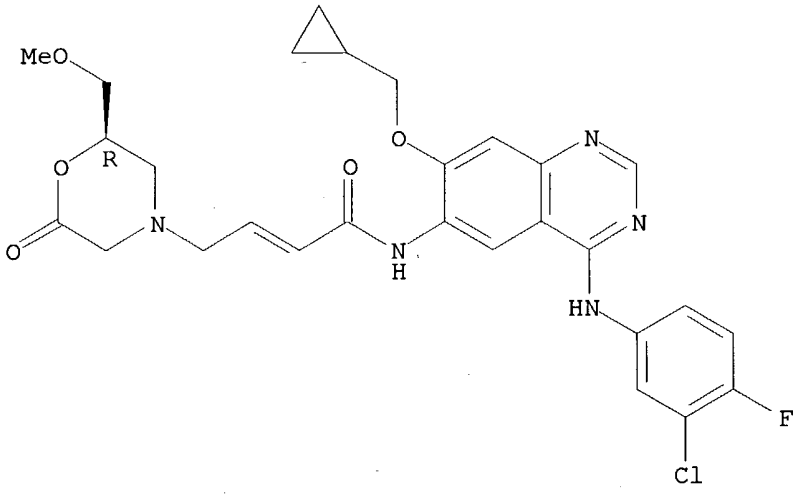
AB The invention relates to novel medicinal compns. on the basis of anticholinergic agents and EGFR kinase inhibitors, methods for their production and their use for treating respiratory diseases. Thus a series of quinazoline derivs. were synthesized that were EGFR kinase inhibitors. A typical inhalation powder contained (μg/capsule): tiotropium bromide 10.8; EGFR kinase inhibitor 3500; lactose 3489.2.

IT **402569-98-6P 402724-01-0P 402724-05-4P**

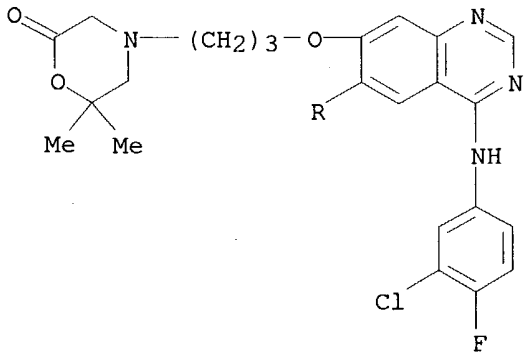
402724-09-8P 402724-18-9P 402734-65-0P
402735-03-9P 402855-52-1P 402855-53-2P
402855-58-7P
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(inhalants containing anticholinergic agents and EGFR kinase inhibitors)

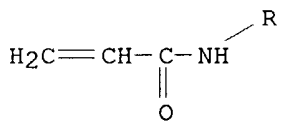
RN 402569-98-6 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 402724-01-0 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[3-(2,2-dimethyl-6-oxo-4-morpholinyl)propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)





RN 402724-05-4 CAPLUS

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:607455 CAPLUS
DOCUMENT NUMBER: 139:159940
TITLE: Use of tyrosine kinase inhibitors for treatment of pulmonary inflammatory conditions
INVENTOR(S): Jung, Birgit; Puschner, Hubert
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany
SOURCE: Ger. Offen., 24 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

assigned

different substitution

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10204462	A1	20030807	DE 2002-10204462	20020205
WO 2003066060	A2	20030814	WO 2003-EP814	20030128
WO 2003066060	A3	20040115		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

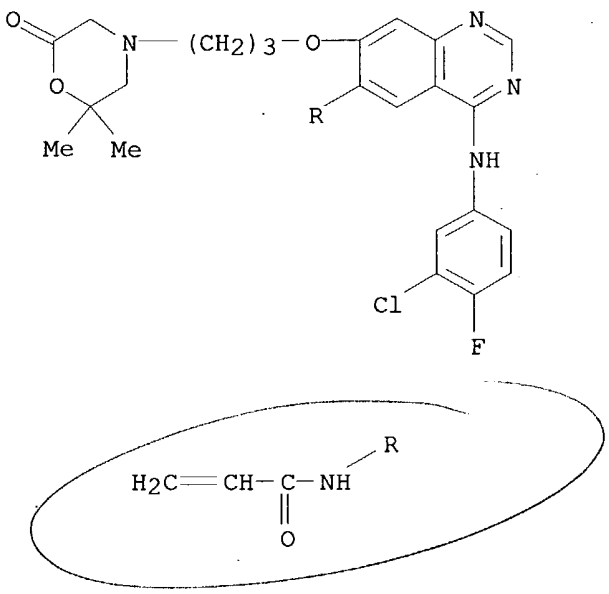
US 2003149062	A1	20030807	US 2003-353616	20030129

PRIORITY APPLN. INFO.: DE 2002-10204462 A 20020205
OTHER SOURCE(S): MARPAT 139:159940

AB The invention discloses the use of quinazoline derivs. (Markush included), or the compds. (1) 4-[(3-chloro-4-fluorphenyl)amino]-6-[(4-dimethylaminocyclohexyl)amino]pyrimido[5,4-d]pyrimidine; (2) 4-[(R)-(1-phenylethyl)amino]-6-(4-hydroxyphenyl)-7H-pyrrolo[2,3-d]pyrimidine; (3) 4-[(3-Chloro-4-(3-fluoro-4-benzyloxy)phenyl)amino]-6-[5-(((2-methansulfonylethyl)amino)methyl)-furan-2-yl]quinazoline; or the antibody cetuximab C225, trastuzumab, ABX-EGF, Mab ICR-62 and EGFR antisense, their tautomers, their stereoisomers and their salts, in particular their physiol. compatible salts with inorg. or organic acids or bases, for the production of a medication for prevention or treatment of diseases of the respiratory system or the lung. Preparation of quinazoline compds. is included.

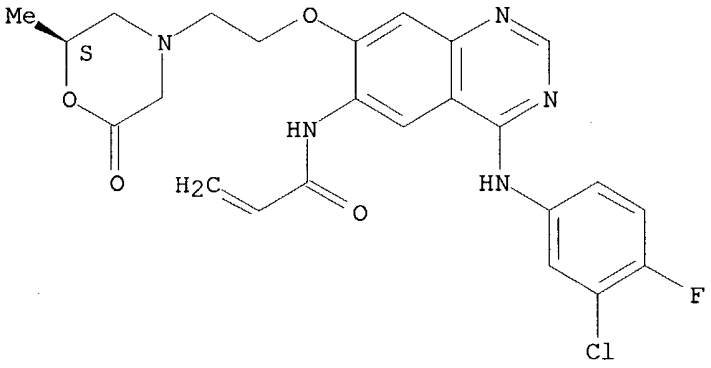
IT **402724-01-0P 402724-11-2P 402724-18-9P**
402724-19-0P 402734-65-0P 402735-03-9P
402855-52-1P 402855-58-7P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tyrosine kinase inhibitors for treatment of pulmonary inflammatory conditions)

RN 402724-01-0 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[3-(2,2-dimethyl-6-oxo-4-morpholinyl)propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



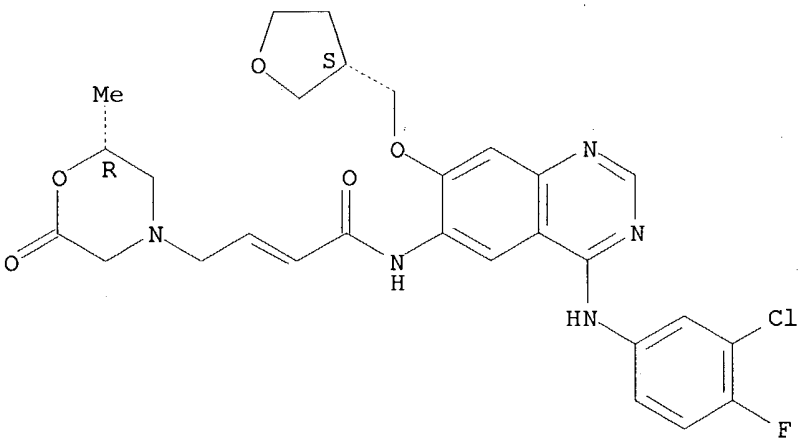
RN 402724-11-2 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[2-[(2S)-2-methyl-6-oxo-4-morpholinyl]ethoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

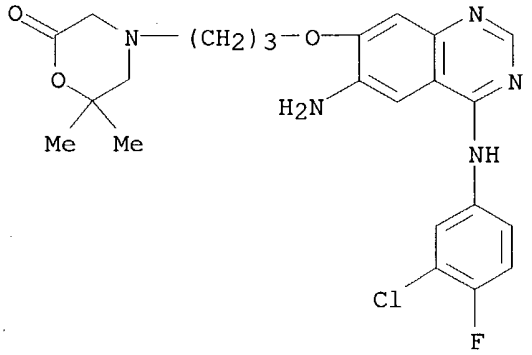


RN 402724-18-9 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[4-[(2S)-2-methyl-6-oxo-4-morpholinyl]butoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **402723-54-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(tyrosine kinase inhibitors for treatment of pulmonary inflammatory conditions)
RN 402723-54-0 CAPLUS
CN 2-Morpholinone, 4-[3-[[6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-quinazolinyl]oxy]propyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



L3 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:171892 CAPLUS
DOCUMENT NUMBER: 136:216762
TITLE: Preparation of 4-amino-6-heterocyclylcarbonylaminoquinazolines as epidermal growth factor receptor signal transduction inhibitors
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Kg, Germany
SOURCE: PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

diff sub, assigned 6,740,651

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002018376	A1	20020307	WO 2001-EP9536		20010818
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
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AU 2001095482	A5	20020313	AU 2001-95482		20010818
EP 1315720	A1	20030604	EP 2001-976108		20010818
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
JP 2004507538	T2	20040311	JP 2002-523891		20010818
US 2002115675	A1	20020822	US 2001-934631		20010822
US 6740651	B2	20040525			
PRIORITY APPLN. INFO.:			DE 2000-10042062	A	20000826
			US 2000-230542P	P	20000905
			WO 2001-EP9536	W	20010818

OTHER SOURCE(S): MARPAT 136:216762

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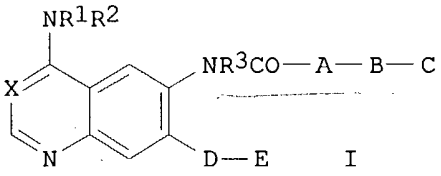


I

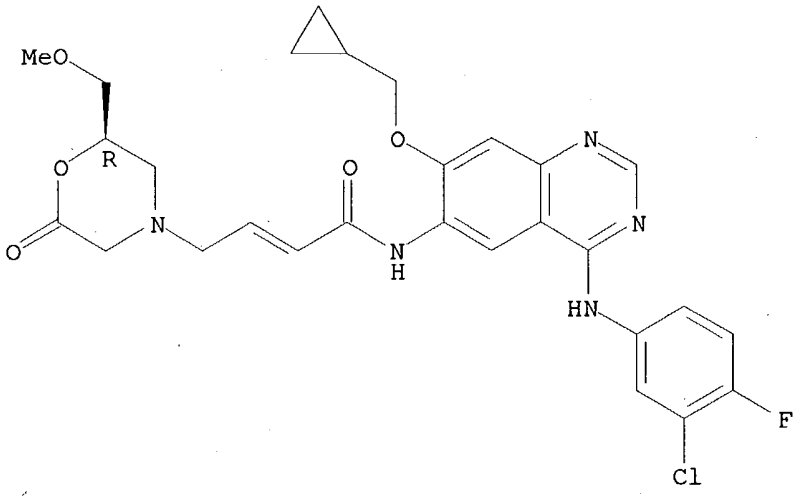
AB Title compds. [I; X = N, (substituted) methynyl; R1 = H, Me; R2 = (substituted) Ph, PhCH2, 1-phenylethyl; R3 = H, Me; A = (substituted) vinyl, ethynyl, 1,3-butadien-1,4-yl; B = (substituted) alkenyl, alkenylcarbonyl, etc.; C = (substituted) 2-oxomorpholin-4-yl, etc; D = oxyalkenyl, O; E = (substituted) amino, alkenylimino, imidazolyl, cycloalkyl; or DE = H, (substituted) alkoxy, etc.], were prepared Thus, 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-[N-(ethoxycarbonylmethyl)-N-((R)-2-hydroxy-3-methoxypropyl)amino]-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxyquinazoline (preparation given) and MeSO2OH in MeCN were stirred for 4 h under reflux to give 69% 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-[(R)-2-methoxymethyl-6-oxomorpholin-4-yl]-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxyquinazoline. The latter inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 2 nM. The invention relates to the use of the title compds. for treating tumor diseases, and lung and respiratory tract disorders.

IT **402569-98-6P 402570-00-7P 402570-01-8P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of (amino)(heterocyclylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

RN 402569-98-6 CAPLUS

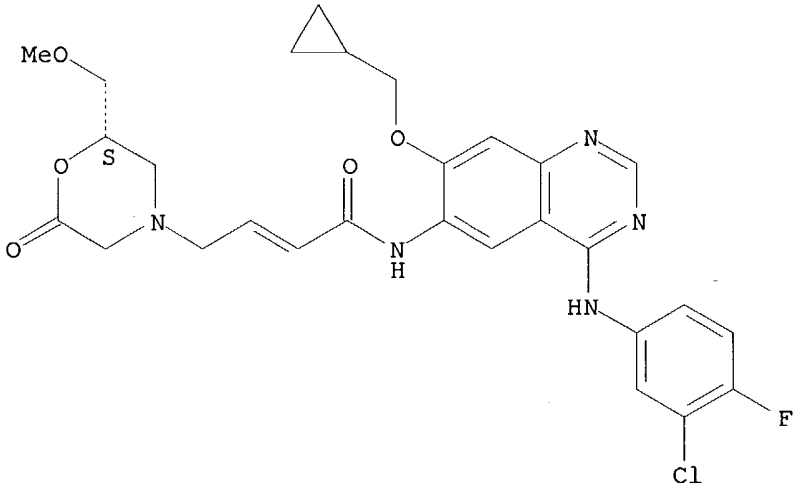
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

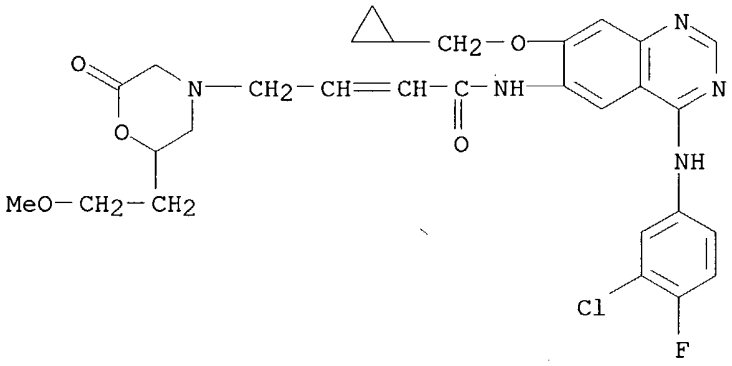


RN 402570-00-7 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2S)-2-(methoxymethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



RN 402570-01-8 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[2-(2-methoxyethyl)-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:171891 CAPLUS
DOCUMENT NUMBER: 136:216761
TITLE: Preparation of 4-amino-6-vinylcarbonylaminoquinazoline s as epidermal growth factor receptor signal transduction inhibitors
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Kg, Germany
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2002018375	A1	20020307	WO 2001-EP9534		20010818
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
DE 10042064	A1	20020307	DE 2000-10042064		20000826
AU 2002010444	A5	20020313	AU 2002-10444		20010818
EP 1322645	A2	20030702	EP 2001-978279		20010818
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
JP 2004507537	T2	20040311	JP 2002-523890		20010818
US 6403580	B1	20020611	US 2001-935498		20010823
PRIORITY APPLN. INFO.:			DE 2000-10042064	A	20000826
			US 2000-230541P	P	20000905
			WO 2001-EP9534	W	20010818

OTHER SOURCE(S): MARPAT 136:216761
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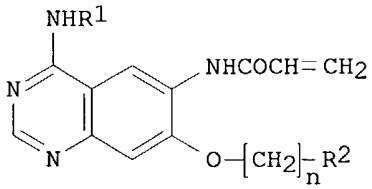


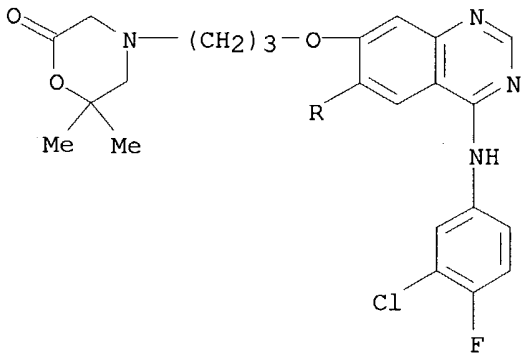
I

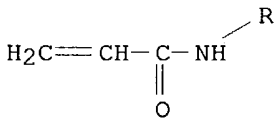
AB Title compds. [I; R1 = PhCH2, 1-phenylethyl, (substituted) Ph; R2 = N-(2-oxotetrahydrofuran-4-yl)methylamino, N(CH2CO2R3)2, (substituted) R4OCOCH2NCH2CH2OH, 2-oxomorpholin-4-yl; R3 = H, Me, Et; R4 = H, alkyl; n = 2-4],were prepared Thus, a mixture of CH2:CHCO2H and Et3N was stirred for 1 h at -50° with CH2:CHCO2Cl in THF followed by addition of 6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-[3-(2,2-dimethyl-6-oxomorpholin-4-yl)propyloxy]quinazoline (preparation given) in THF at -55° and slowly heating up at 0° up to completely conversion to give 60% 4-[(3-chloro-4-fluorophenyl)amino]-7-[3-(2,2-dimethyl-6-oxomorpholin-4-yl)propyloxy]-6-[(vinylcarbonyl)amino]quinazoline. One of the exemplified examples, 4-[(R)-(1-phenylethyl)amino]-7-[2-(2,2-dimethyl-6-oxomorpholin-4-yl)ethoxy]-6-[(vinylcarbonyl)amino]quinazoline, inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 0.4 nM. The invention relates to the use of the title compds. for treating tumor diseases, and lung and respiratory tract disorders.

IT **402724-01-0P 402724-02-1P 402724-05-4P**
402724-09-8P 402724-10-1P 402724-11-2P
402724-12-3P 402724-14-5P 402724-16-7P
402724-17-8P 402724-18-9P 402724-19-0P
402724-21-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of (amino)(vinylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

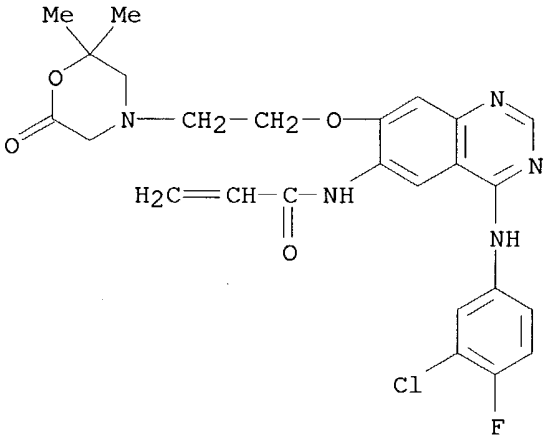
RN 402724-01-0 CAPLUS

CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[3-(2,2-dimethyl-6-oxo-4-morpholinyl)propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



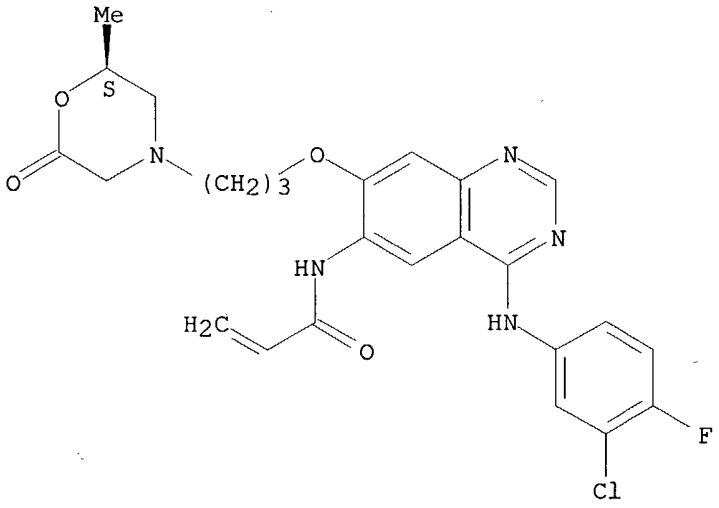


RN 402724-02-1 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[2-(2,2-dimethyl-6-oxo-4-morpholinyl)ethoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



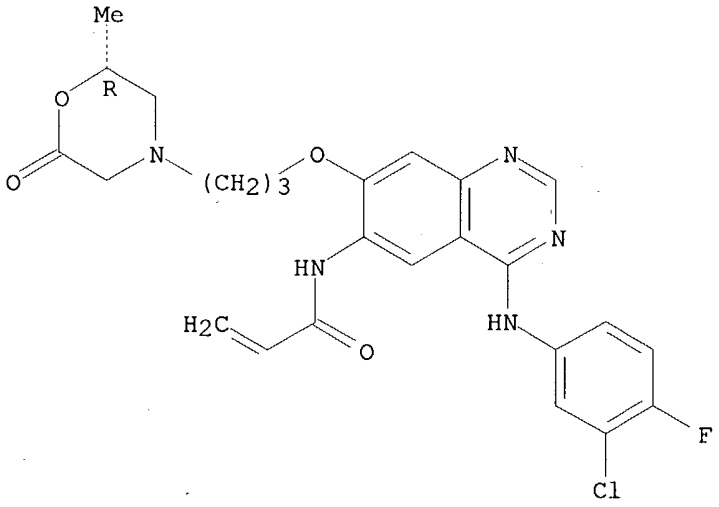
RN 402724-05-4 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[3-[(2S)-2-methyl-6-oxo-4-morpholinyl]propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



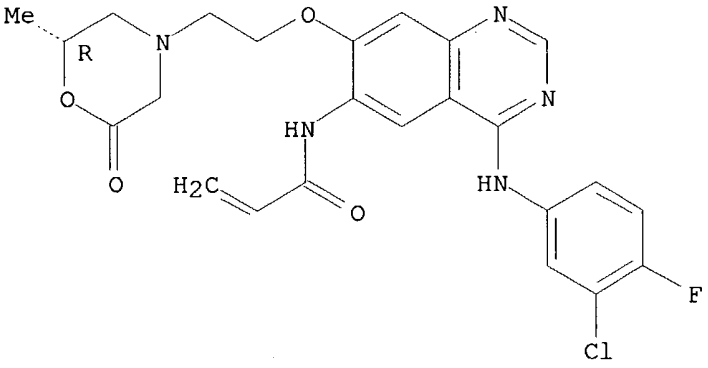
RN 402724-09-8 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[3-[(2R)-2-methyl-6-oxo-4-morpholinyl]propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



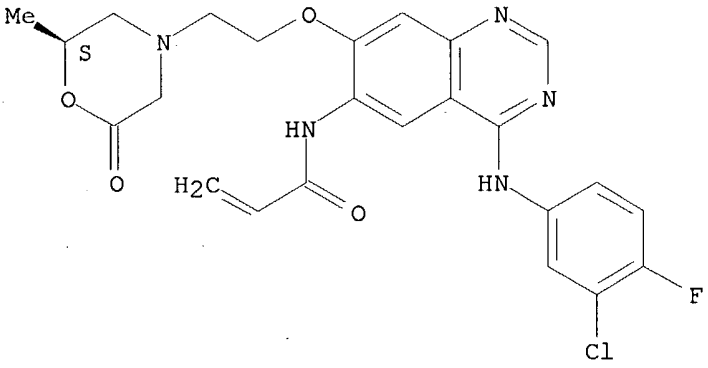
RN 402724-10-1 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[2-[(2R)-2-methyl-6-oxo-4-morpholinyl]ethoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



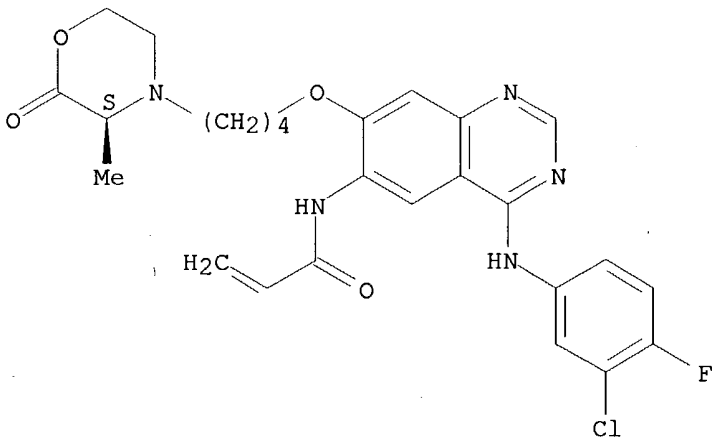
RN 402724-11-2 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[2-[(2S)-2-methyl-6-oxo-4-morpholinyl]ethoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

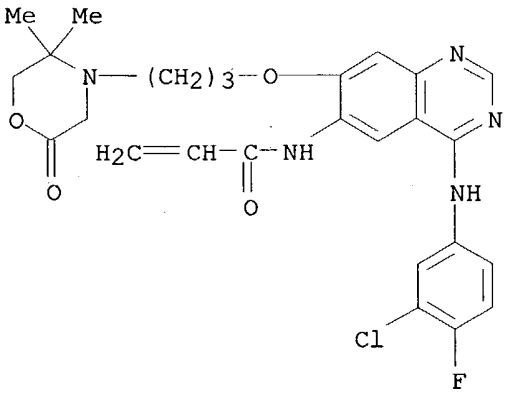


RN 402724-12-3 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[4-[(3S)-3-methyl-2-oxo-4-morpholinyl]butoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

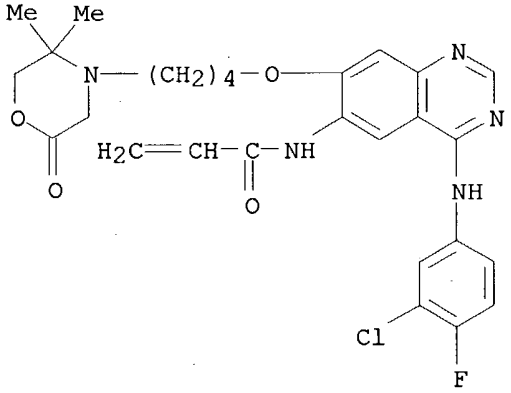
Absolute stereochemistry.



RN 402724-14-5 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[3-(5,5-dimethyl-2-oxo-4-morpholinyl)propoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

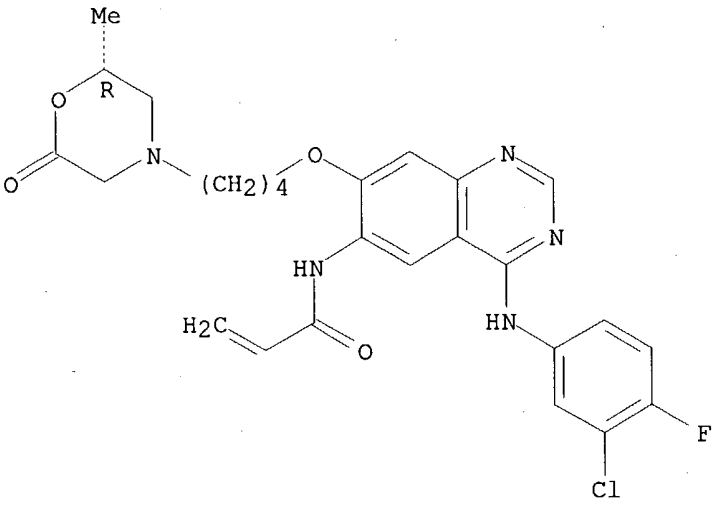


RN 402724-16-7 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[4-(5,5-dimethyl-2-oxo-4-morpholinyl)butoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



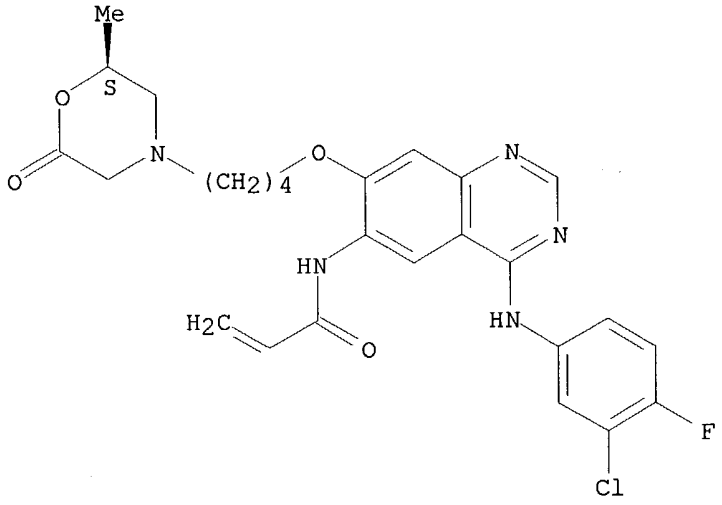
RN 402724-17-8 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[4-[(2R)-2-methyl-6-oxo-4-morpholinyl]butoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

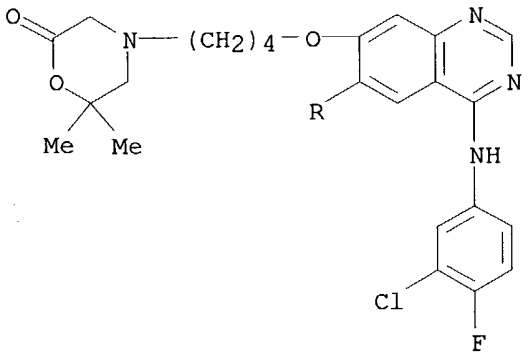


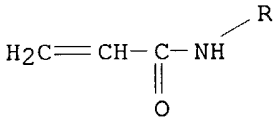
RN 402724-18-9 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[4-[(2S)-2-methyl-6-oxo-4-morpholinyl]butoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

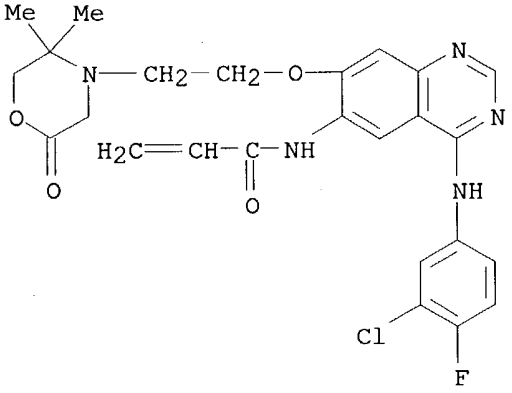


RN 402724-19-0 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[4-(2,2-dimethyl-6-oxo-4-morpholinyl)butoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)





RN 402724-21-4 CAPLUS
CN 2-Propenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[2-(5,5-dimethyl-2-oxo-4-morpholinyl)ethoxy]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



IT **402723-54-0P 402723-55-1P 402723-56-2P**
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402723-62-0P 402723-63-1P 402723-66-4P
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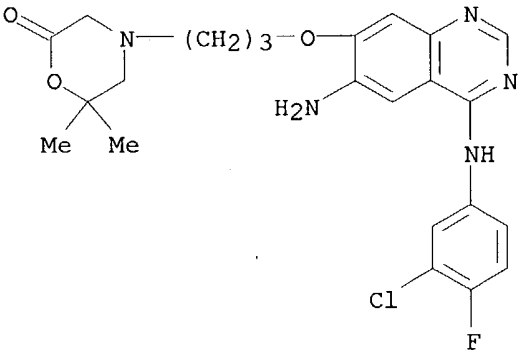
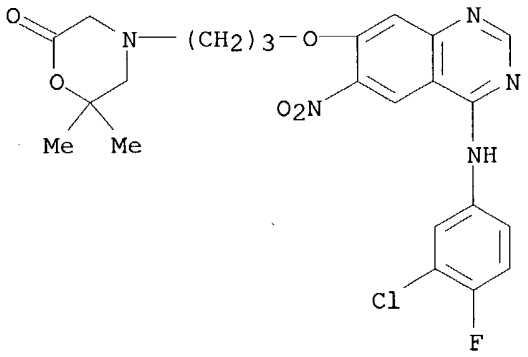
402723-85-7P 402723-86-8P 402723-87-9P
402723-88-0P 402723-89-1P 402723-90-4P
402723-91-5P 402723-94-8P 402723-96-0P
402723-97-1P 402723-98-2P 402723-99-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of (amino)(vinylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

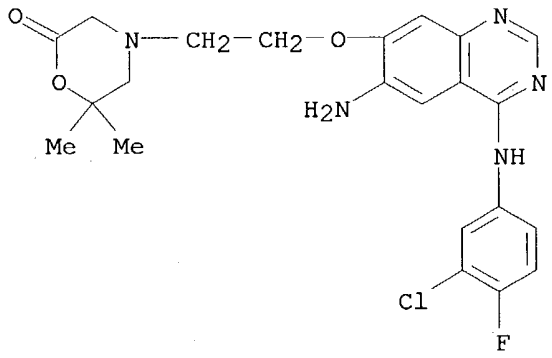
RN 402723-54-0 CAPLUS
CN 2-Morpholinone, 4-[3-[[6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-quinazolinyl]oxy]propyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



RN 402723-55-1 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-6-nitro-7-quinazolinyl]oxy]propyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)

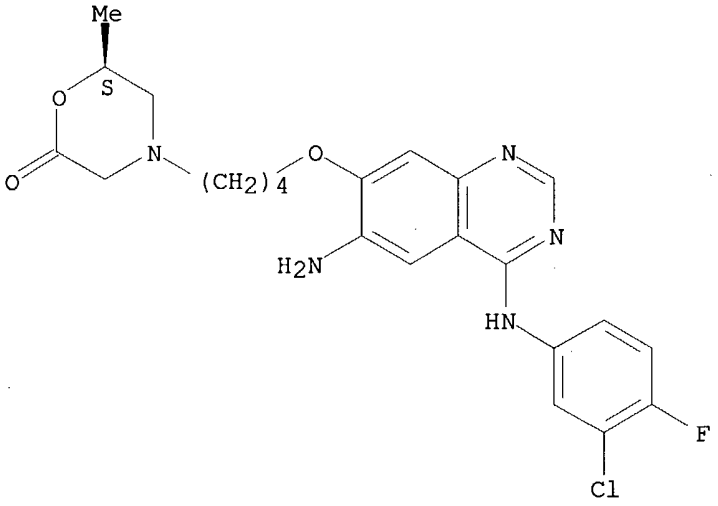


RN 402723-56-2 CAPLUS
CN 2-Morpholinone, 4-[2-[[6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)

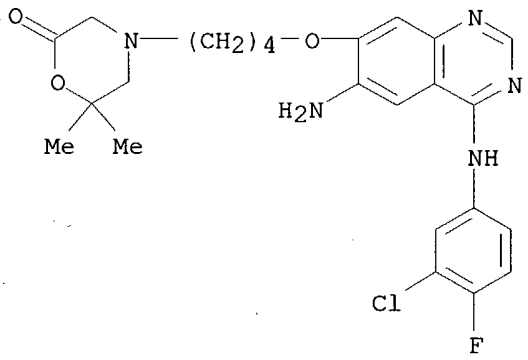


RN 402723-58-4 CAPLUS
CN 2-Morpholinone, 4-[3-[[6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-quinazolinyl]oxy]propyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 402723-99-3 CAPLUS
CN 2-Morpholinone, 4-[4-[[6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-quinazolinyl]oxy]butyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:171889 CAPLUS
DOCUMENT NUMBER: 136:232315
TITLE: Preparation of 4-amino-6-vinylcarbonylaminoquinazolines as epidermal growth factor receptor signal transduction inhibitors
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Kg, Germany
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

assignee

diff sub.

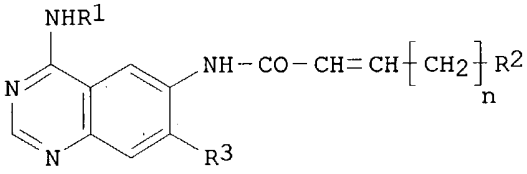
6,653,305

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002018373	A1	20020307	WO 2001-EP9537	20010818
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10042060	A1	20020307	DE 2000-10042060	20000826
US 2002077330	A1	20020620	US 2001-929931	20010815
US 6653305	B2	20031125		
AU 2001084021	A5	20020313	AU 2001-84021	20010818
EP 1315717	A1	20030604	EP 2001-962953	20010818
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004517048	T2	20040610	JP 2002-523888	20010818
PRIORITY APPLN. INFO.:			DE 2000-10042060 A	20000826
			US 2000-230389P P	20000906
			WO 2001-EP9537 W	20010818

OTHER SOURCE(S): MARPAT 136:232315

GI



I

AB Title compds. [I; R1 = PhCH2, 1-phenylethyl, (substituted) Ph; R2 = N-[(1,3-dioxolan-2-yl)methyl]methylamino, (substituted) R4OCOCH2NCH2CH2OH, 2-oxomorpholin-4-yl; R4 = H, alkyl; R3 = H, (alkoxy)alkoxy, cycloalkylalkoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuranylmethoxy, tetrahydropyranylmethoxy; n = 1-3], were prepared Thus, a mixture of 6-amino-4-[(3-chloro-4-fluorophenyl)amino]-7-cyclopropylmethoxyquinazoline (preparation given) and disopropylethylamine in THF was dropwise treated under ice-cooling with BrCH2CH:CHCO2Cl (preparation given) in CH2Cl2 followed by stirring for 1 h under ice-cooling and for 2 h at room temperature and addition of (S)-(2-hydroxypropylamino)acetic acid tert-Bu ester in CH2Cl2 to give after stirring over night at room temperature and stirring for 5 h at 60° 64% 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-[N-(tert-butyloxycarbonylmethyl)-N-((S)-2-hydroxyprop-1-yl)amino]-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxyquinazoline. Several I inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 0.02-15 nM. The invention relates to the use of the title compds. for treating tumor diseases, and lung and respiratory tract disorders.

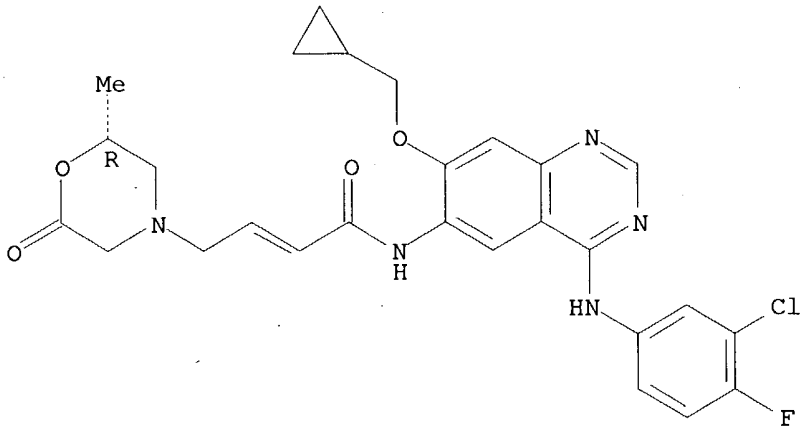
IT **402855-53-2P**

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of (amino)(vinylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

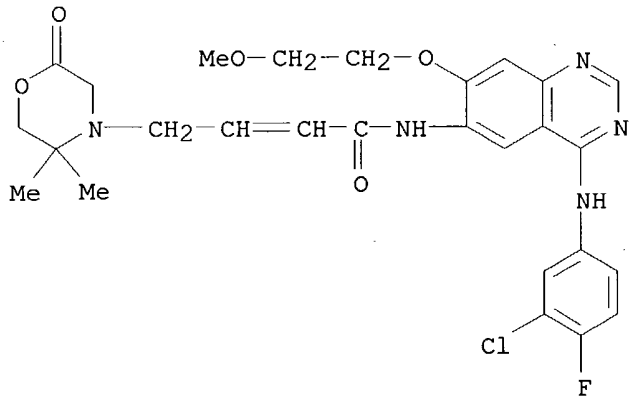
RN 402855-53-2 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[(2R)-2-methyl-6-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

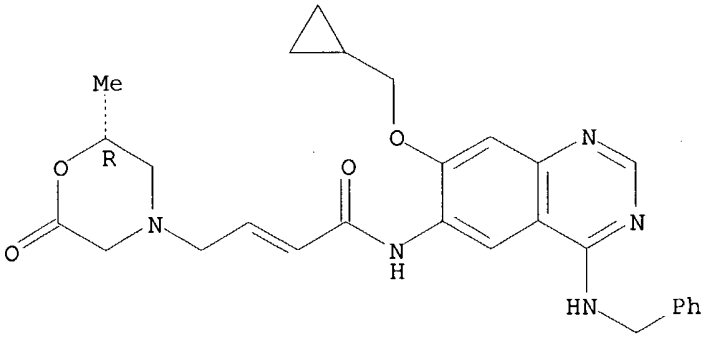
Absolute stereochemistry.
Double bond geometry unknown.



IT **402855-19-0P 402855-22-5P 402855-23-6P**
402855-25-8P 402855-29-2P 402855-32-7P
402855-33-8P 402855-34-9P 402855-35-0P
402855-38-3P 402855-47-4P 402855-48-5P
402855-52-1P 402855-54-3P 402855-55-4P
402855-56-5P 402855-57-6P 402855-58-7P
402855-59-8P 402855-60-1P 402855-62-3P
402855-63-4P 402855-64-5P 402855-66-7P
402855-67-8P 402855-70-3P 402855-71-4P
402855-72-5P 402855-73-6P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of (amino)(vinylcarbonylamino)quinazolines as epidermal growth factor receptor signal transduction inhibitors)

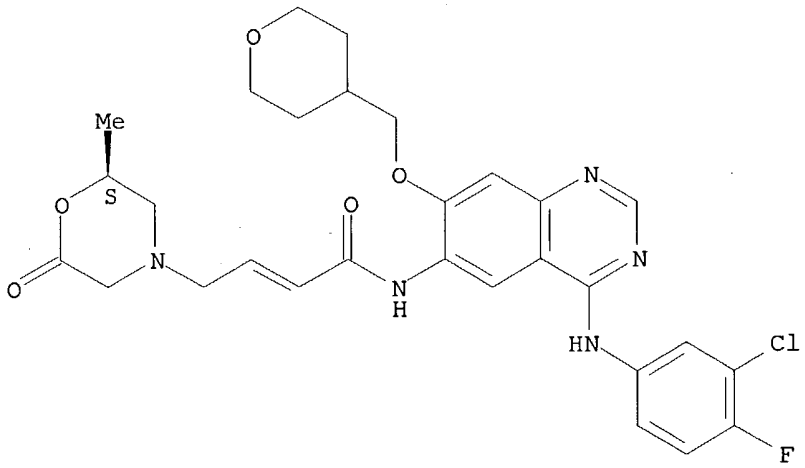
RN 402855-19-0 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(2-methoxyethoxy)-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)





RN 402855-73-6 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[(tetrahydro-2H-pyran-4-yl)methoxy]-6-quinazolinyl]-4-[(2S)-2-methyl-6-oxo-4-morpholinyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:171888 CAPLUS
DOCUMENT NUMBER: 136:216759
TITLE: Preparation of aminoquinazolines as epidermal growth factor receptor signal transduction inhibitors
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Kg, Germany
SOURCE: PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

assignee
6,617,329

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

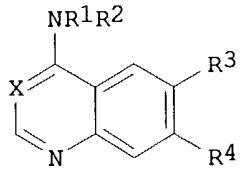
WO 2002018372		A1	20020307	WO 2001-EP9533	20010818
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10042059		A1	20020307	DE 2000-10042059	20000826
AU 2001095481		A5	20020313	AU 2001-95481	20010818
EP 1315718		A1	20030604	EP 2001-976107	20010818
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004507535		T2	20040311	JP 2002-523887	20010818
US 2002049197		A1	20020425	US 2001-938314	20010823
US 6617329		B2	20030909		

PRIORITY APPLN. INFO.:

DE 2000-10042059	A	20000826
US 2000-230118P	P	20000905
WO 2001-EP9533	W	20010818

OTHER SOURCE(S): MARPAT 136:216759

GI



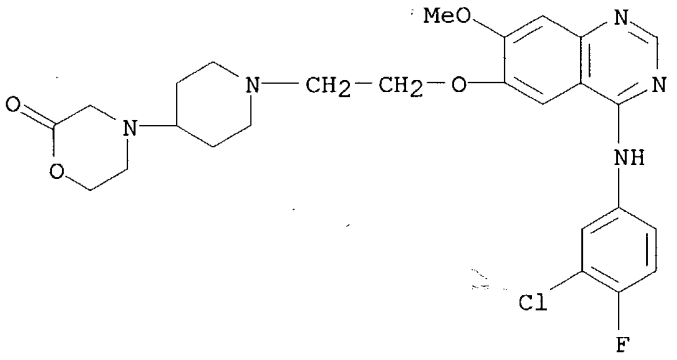
I

AB Title compds. [I; X = N, (substituted) methynyl; R1 = H, Me; R2 = (substituted) Ph, PhCH2, 1-phenylethyl; R3, R4 = AB, CD; A = (oxy)alkenyl, O; B = (substituted) pyrrolidinyl, piperidinyl, hexahydroazepinyl, piperazinyl, 2-oxomorpholin-4-yl, etc.; C = oxyalkenyl, O; D = (substituted) amino, alkenylimino, imidazolyl, heterocycloalkyl, alkoxy, cycloalkoxy, cycloalkylalkoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuranylmethoxy, tetrahydropyranylmethoxy, etc.; or CD = H], were prepared Thus, 4-[(3-chloro-4-fluorophenyl)amino]-6-cyclopentyloxy-7-[2-(piperazin-1-yl)ethoxy]quinazoline (preparation given) in MeCN was refluxed for 4 h with K2CO3, NaI, and (R)-5-[(methanesulfonyloxy)methyl]-2-oxotetrahydrofuran followed by addition of (R)-5-[(methanesulfonyloxy)methyl]-2-oxotetrahydrofuran and reflux for 15 h to give 47% 4-[(3-chloro-4-fluorophenyl)amino]-6-cyclopentyloxy-7-[2-(4-[(R)-(2-oxotetrahydrofuran-5-yl)methyl]piperazin-1-yl)ethoxy]quinazoline. Several I inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 4-67 nM. The invention relates to the use of the title compds. for treating tumor diseases, and lung and respiratory tract disorders.

IT **402573-59-5P 402573-60-8P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of aminoquinazolines as epidermal growth factor receptor signal transduction inhibitors)

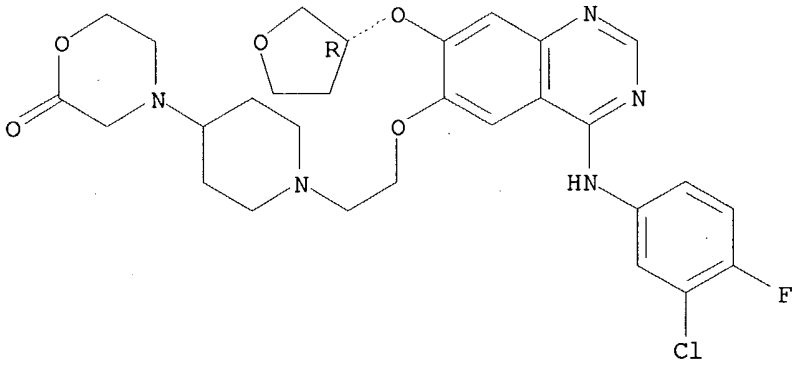
RN 402573-59-5 CAPLUS

CN 2-Morpholinone, 4-[1-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]ethyl]-4-piperidinyl]- (9CI) (CA INDEX NAME)



RN 402573-60-8 CAPLUS
CN 2-Morpholinone, 4-[1-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3R)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]oxy]ethyl]-4-piperidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:171867 CAPLUS
DOCUMENT NUMBER: 136:232314
TITLE: Preparation of aminoquinazolines as epidermal growth factor receptor signal transduction inhibitors
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma Kg, Germany
SOURCE: PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

assign
6,656,946

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002018351	A1	20020307	WO 2001-EP9532	20010818
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10042058	A1	20020307	DE 2000-10042058	20000826
AU 2001087694	A5	20020313	AU 2001-87694	20010818
EP 1315705	A1	20030604	EP 2001-967285	20010818
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001013519	A	20030701	BR 2001-13519	20010818
JP 2004507529	T2	20040311	JP 2002-523469	20010818
US 2002082271	A1	20020627	US 2001-934772	20010822
US 6656946	B2	20031202		
ZA 2003000991	A	20040416	ZA 2003-991	20030205
BG 107559	A	20031031	BG 2003-107559	20030214
NO 2003000870	A	20030225	NO 2003-870	20030225
PRIORITY APPLN. INFO.:			DE 2000-10042058 A	20000826
			US 2000-230035P P	20000905
			WO 2001-EP9532 W	20010818

OTHER SOURCE(S): MARPAT 136:232314

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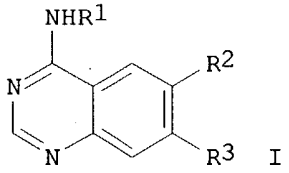


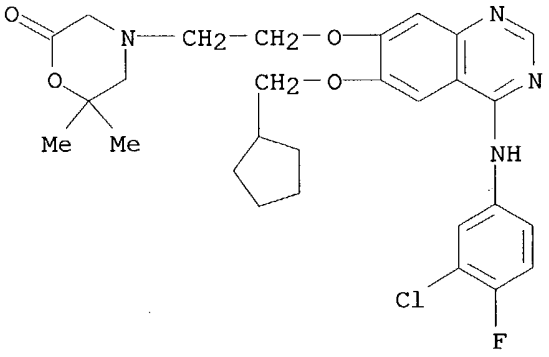
I

AB Title compds. [I; R1 = PhCH2, 1-phenylethyl, (substituted) Ph; R2, R3 = O(CH2)mR4, methoxy, cyclobutyloxy, cyclopentyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuranylmethoxy, tetrahydropyranylmethoxy; R4 = N-(2-oxotetrahydrofuran-4-yl)methylamino, N-(2-oxotetrahydrofuran-4-yl)ethylamino, (substituted) 2-oxo-morpholin-4-yl, R5OCOCH2NCH2CH2OH; R5 = H, alkyl; m = 2-4], were prepared Thus, 4-[(3-bromophenyl)amino]-6-[2-(N-[(tert-butyloxycarbonyl)methyl]-N-((S)-2-hydroxypropyl)amino)ethoxy]-7-methoxyquinazoline (preparation given) in MeCN was stirred under reflux with MeSO2OH for 3 h followed by addition of MeSO2OH up to completely conversion to give 85% 4-[(3-bromophenyl)amino]-6-[2-((S)-6-methyl-2-oxomorpholin-4-yl)ethoxy]-7-methoxyquinoline. Tested I inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 29-59 nM. The invention relates to the use of the title compds. for treating tumor diseases, and lung and respiratory tract disorders.

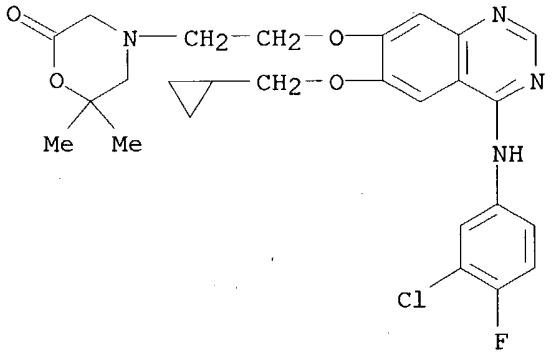
IT **402734-57-0P 402734-58-1P 402734-59-2P**
402734-60-5P 402734-61-6P 402734-65-0P
402734-67-2P 402734-68-3P 402734-69-4P
402734-72-9P 402734-73-0P 402734-74-1P
402734-75-2P 402734-76-3P 402734-77-4P

402734-79-6P 402734-80-9P 402734-82-1P
402734-84-3P 402734-86-5P 402734-90-1P
402734-92-3P 402734-94-5P 402734-95-6P
402734-97-8P 402734-99-0P 402735-01-7P
402735-02-8P 402735-03-9P 402735-06-2P
402735-08-4P 402735-09-5P 402735-11-9P
402735-13-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of aminoquinazolines as epidermal growth factor receptor signal transduction inhibitors)

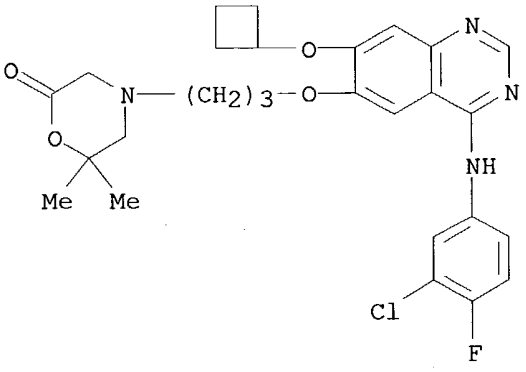
RN 402734-57-0 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopentylmethoxy)-7-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



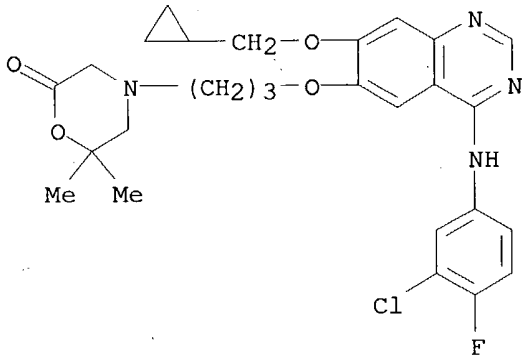
RN 402734-58-1 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopropylmethoxy)-7-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



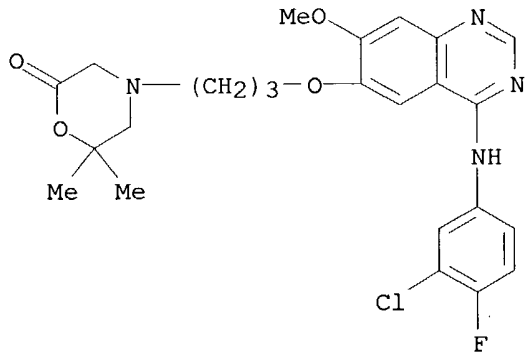
RN 402734-59-2 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutyloxy)-6-quinazolinyl]oxy]propyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



RN 402734-60-5 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]oxy]propyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)

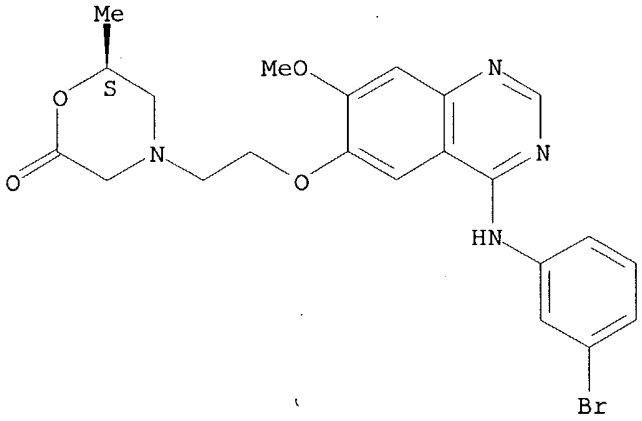


RN 402734-61-6 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]propyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



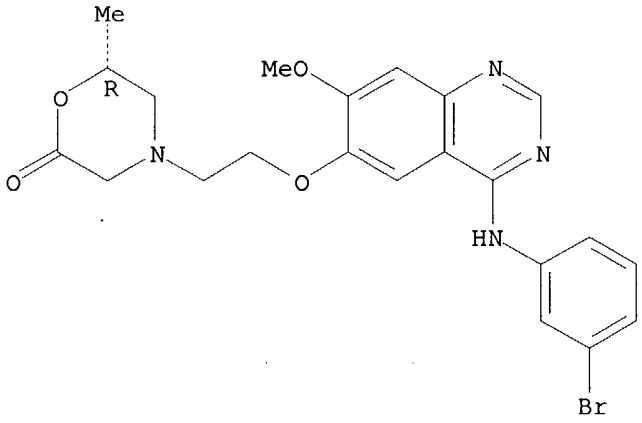
RN 402734-65-0 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-bromophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]ethyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



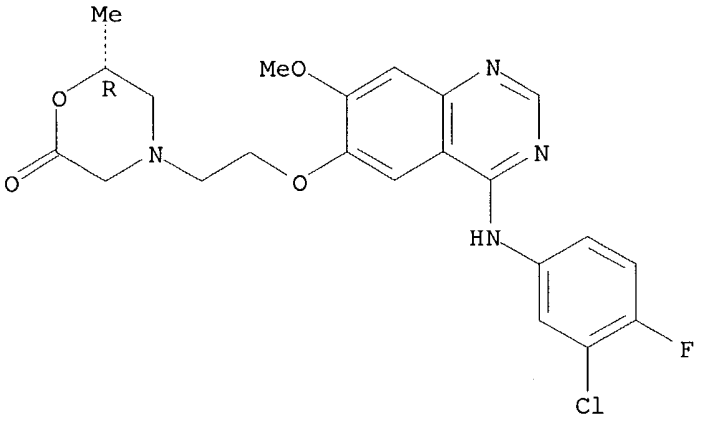
RN 402734-67-2 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-bromophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]ethyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



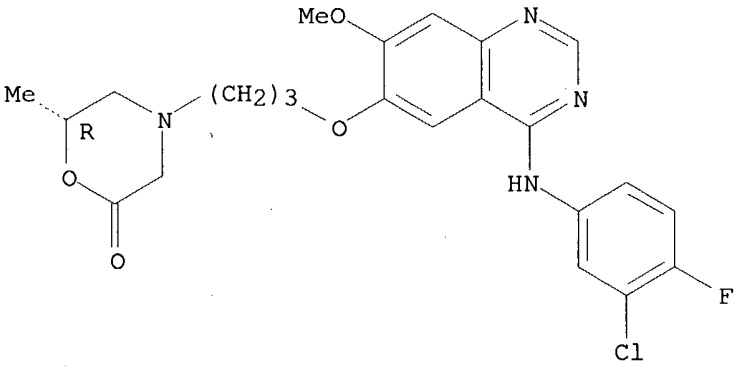
RN 402734-68-3 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]ethyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



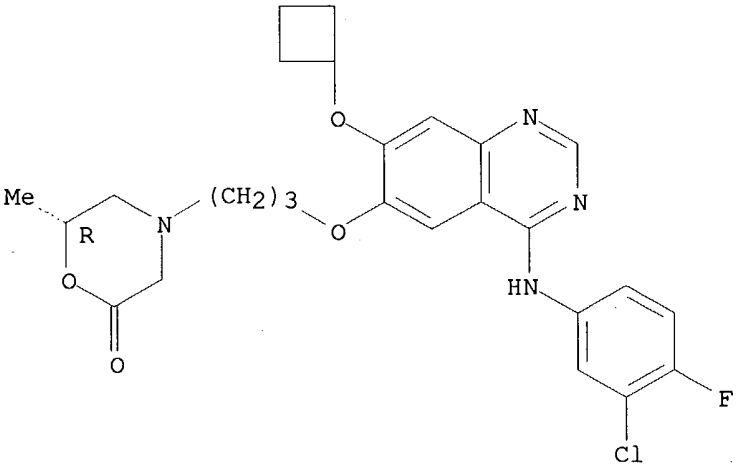
RN 402734-69-4 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]propyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

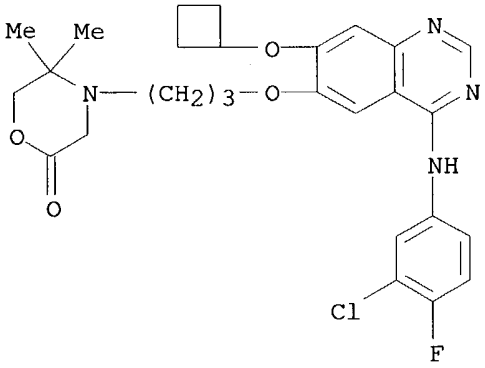


RN 402734-72-9 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutyloxy)-6-quinazolinyl]oxy]propyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

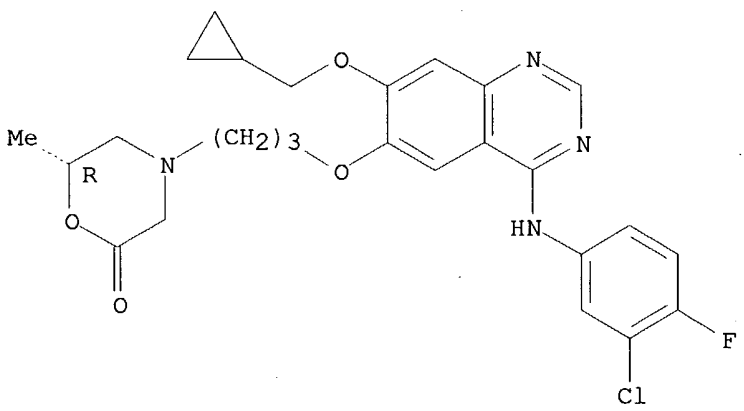


RN 402734-73-0 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclobutyloxy)-6-quinazolinyl]oxy]propyl]-5,5-dimethyl- (9CI) (CA INDEX NAME)



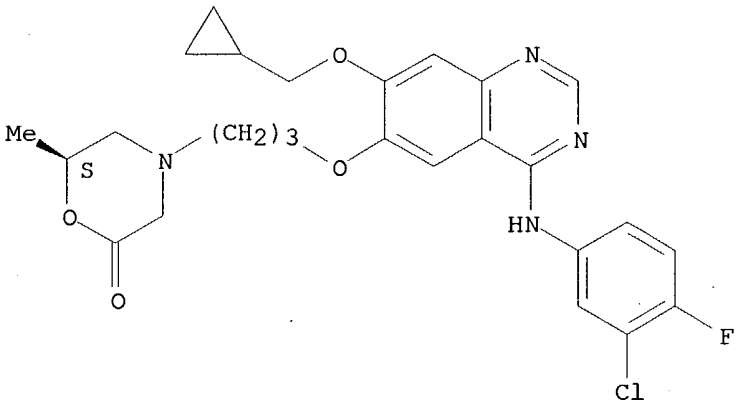
RN 402734-74-1 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]oxy]propyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



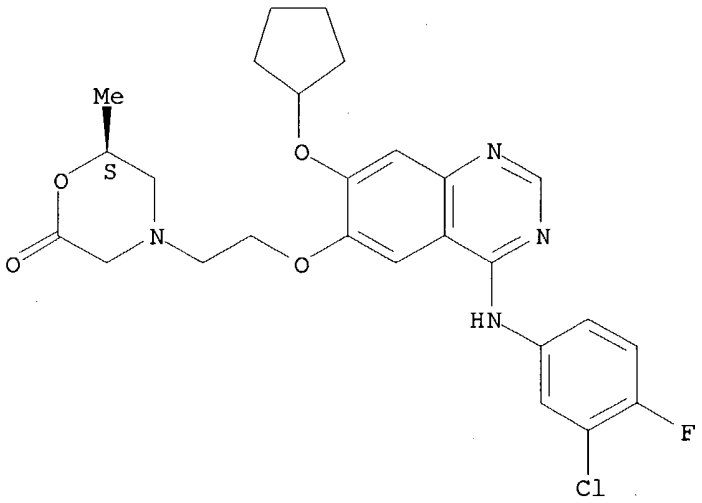
RN 402734-75-2 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]oxy]propyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



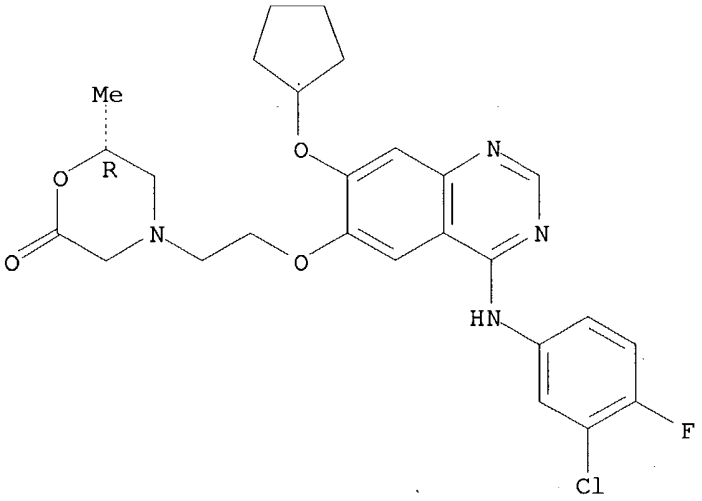
RN 402734-76-3 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentyloxy)-6-quinazolinyl]oxy]ethyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



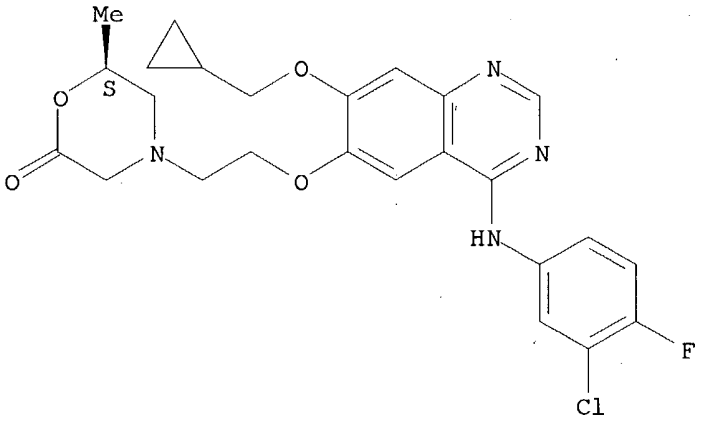
RN 402734-77-4 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentyloxy)-6-quinazolinyl]oxy]ethyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



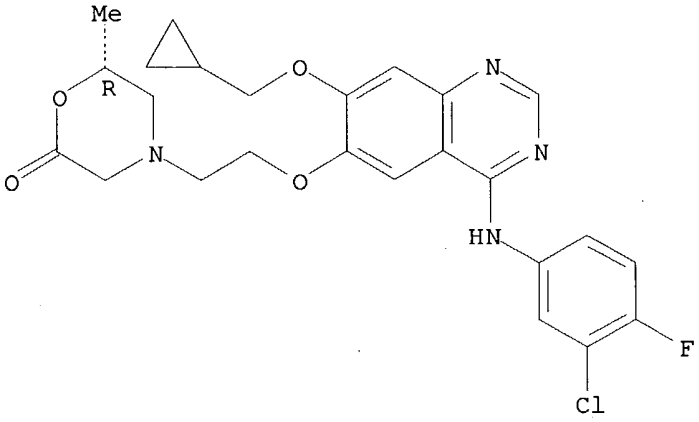
RN 402734-79-6 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]oxy]ethyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



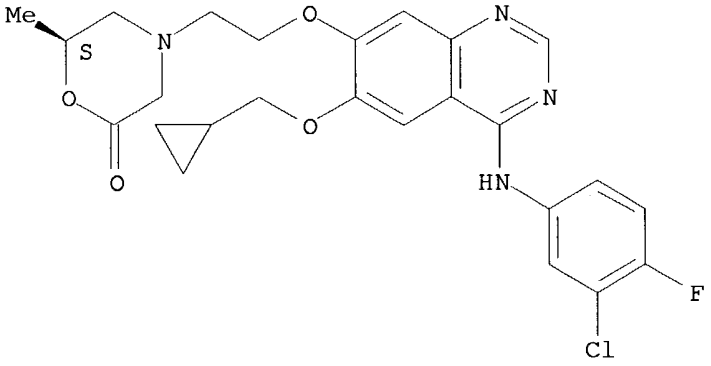
RN 402734-80-9 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]oxy]ethyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



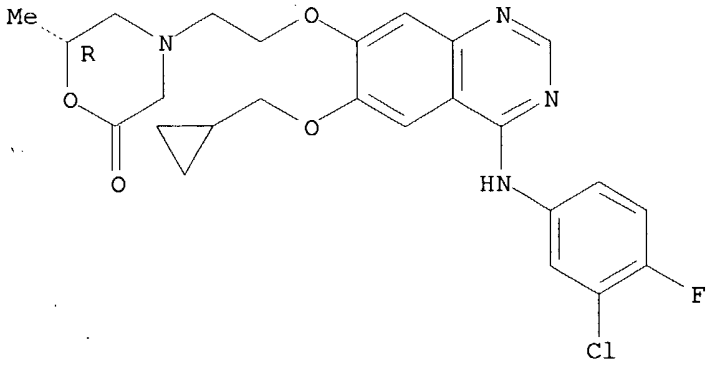
RN 402734-82-1 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopropylmethoxy)-7-quinazolinyl]oxy]ethyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



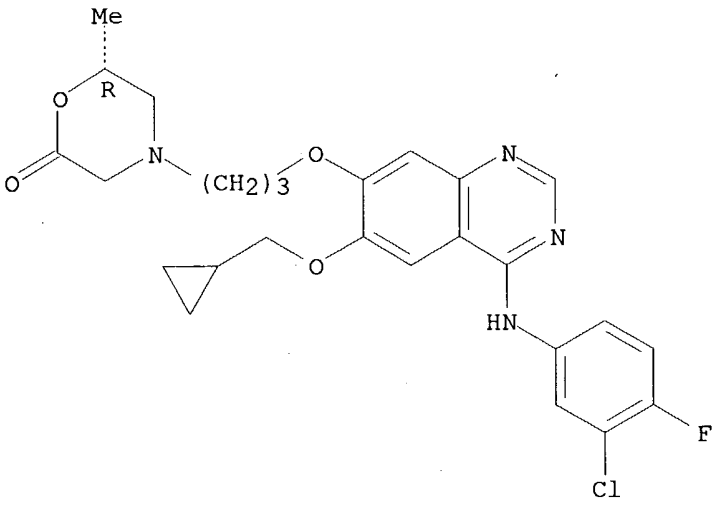
RN 402734-84-3 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopropylmethoxy)-7-quinazolinyl]oxy]ethyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



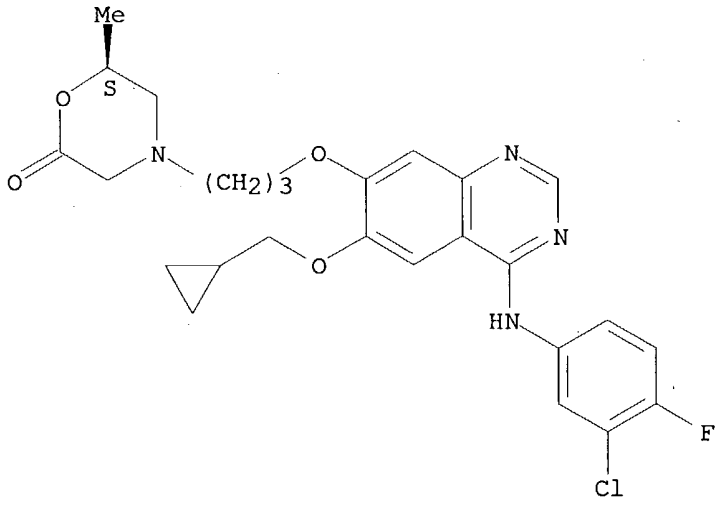
RN 402734-86-5 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopropylmethoxy)-7-quinazolinyl]oxy]propyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

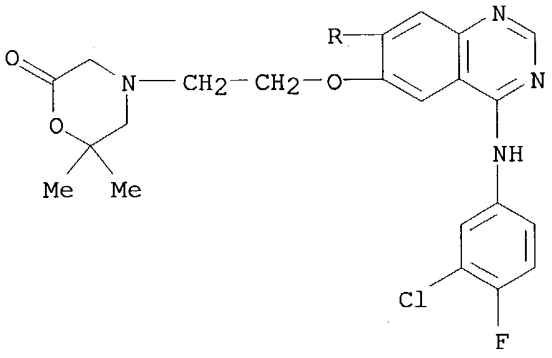


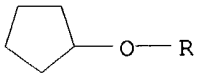
RN 402734-90-1 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopropylmethoxy)-7-quinazolinyl]oxy]propyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



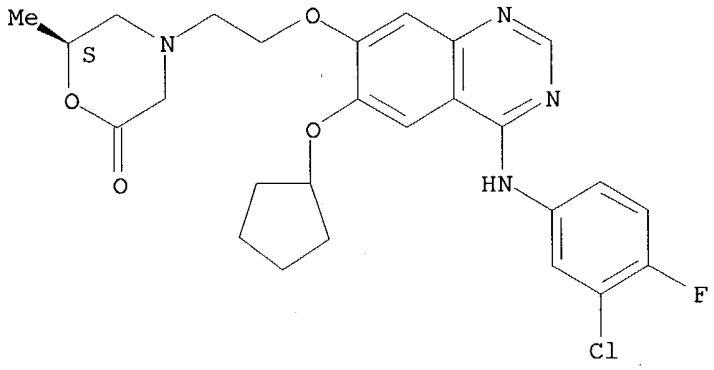
RN 402734-92-3 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentyloxy)-6-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)





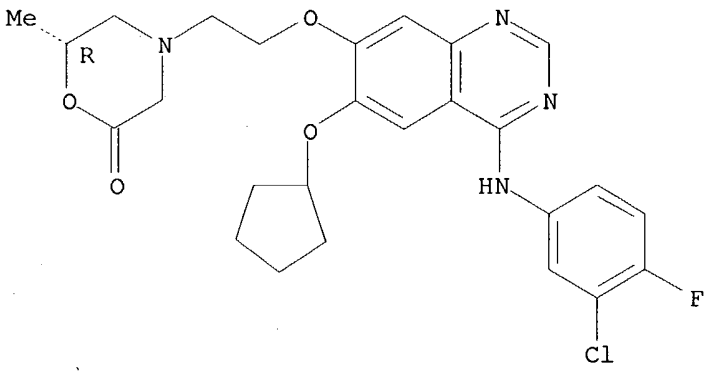
RN 402734-94-5 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopentyloxy)-7-quinazolinyl]oxy]ethyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



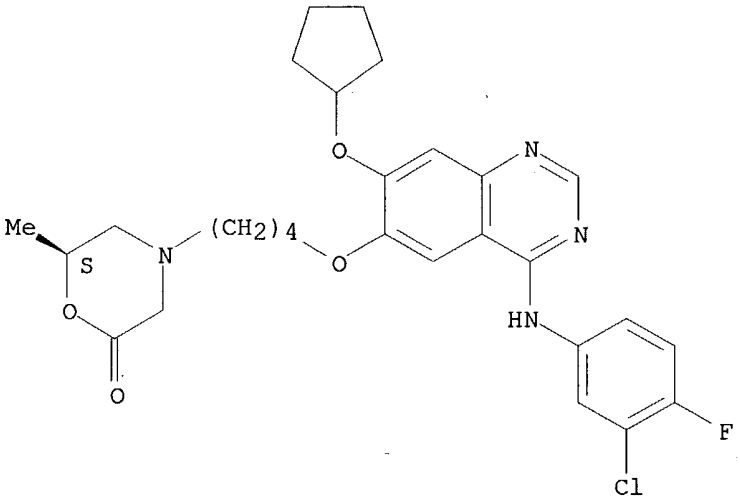
RN 402734-95-6 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopentyloxy)-7-quinazolinyl]oxy]ethyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



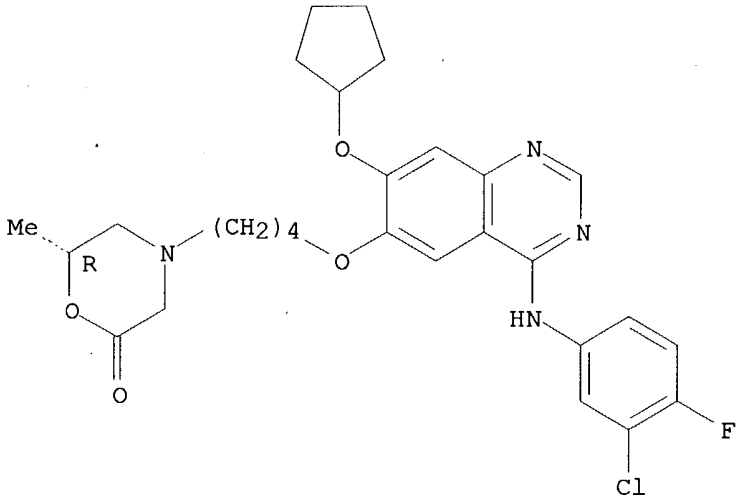
RN 402734-97-8 CAPLUS
CN 2-Morpholinone, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentyloxy)-6-quinazolinyl]oxy]butyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



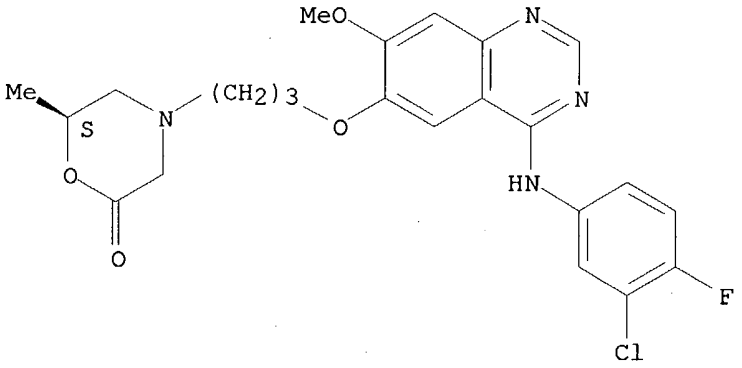
RN 402734-99-0 CAPLUS
CN 2-Morpholinone, 4-[4-[[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopentyloxy)-6-quinazolinyl]oxy]butyl]-6-methyl-, (6R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

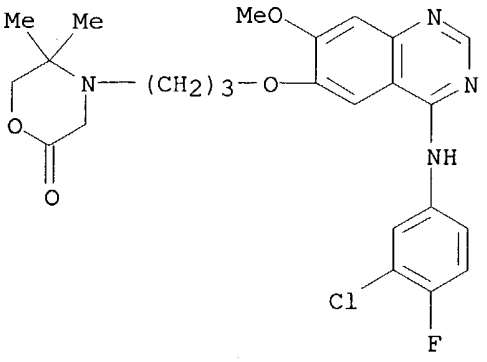


RN 402735-01-7 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]propyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

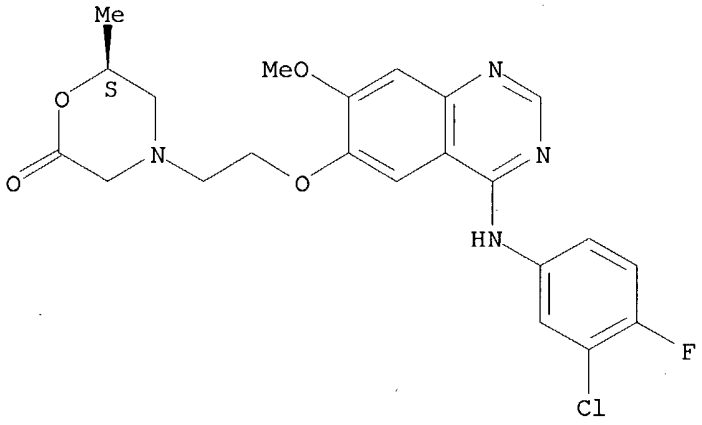


RN 402735-02-8 CAPLUS
CN 2-Morpholinone, 4-[3-[[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]propyl]-5,5-dimethyl- (9CI) (CA INDEX NAME)

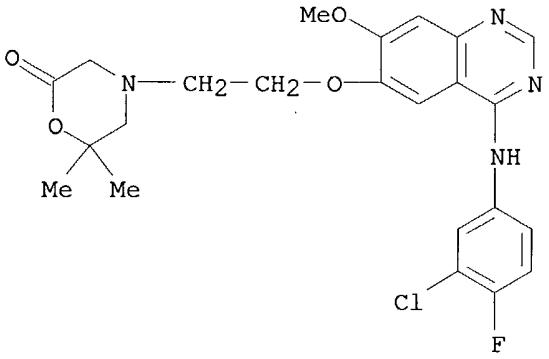


RN 402735-03-9 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]ethyl]-6-methyl-, (6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

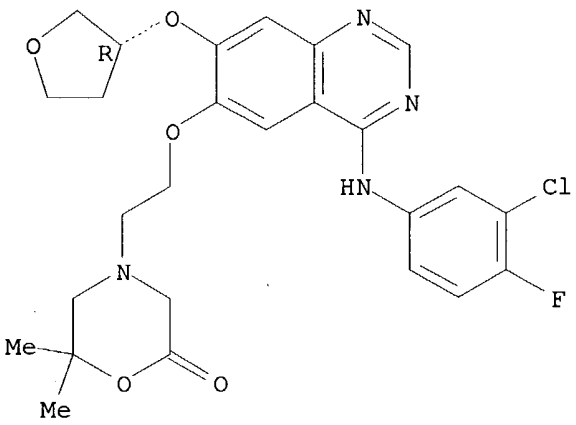


RN 402735-06-2 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



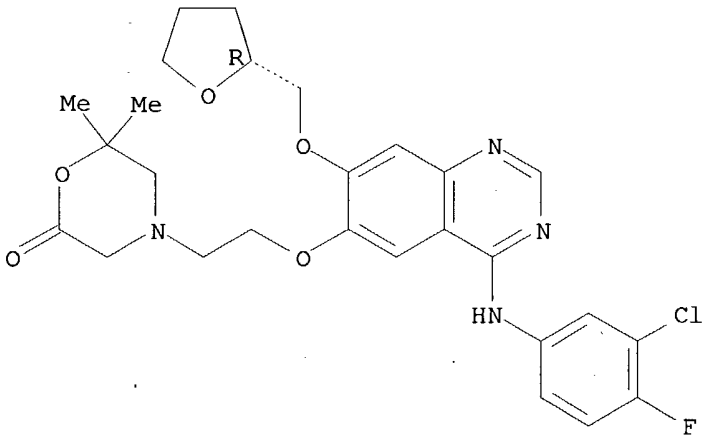
RN 402735-08-4 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3R)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



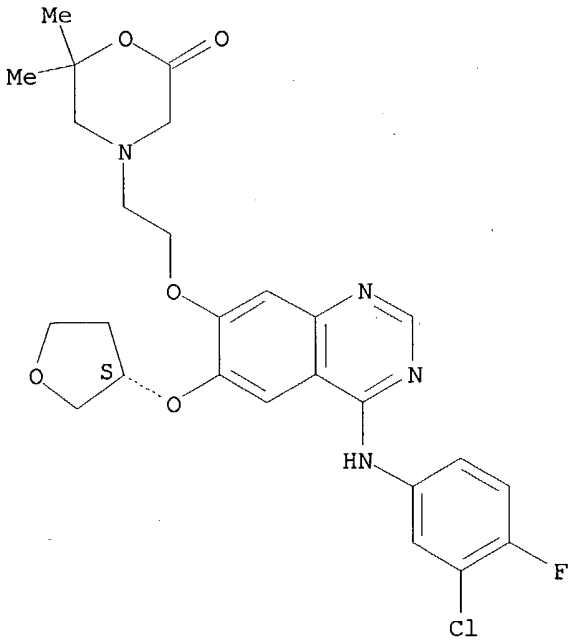
RN 402735-09-5 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(2R)-tetrahydro-2-furanyl]methoxy]-6-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



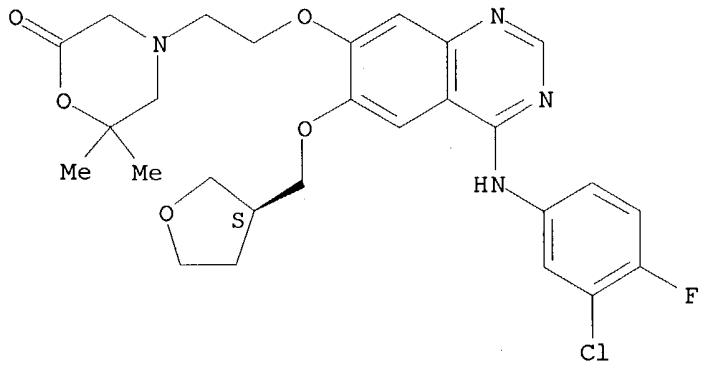
RN 402735-11-9 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-[[(3S)-tetrahydro-3-furanyl]oxy]-7-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 402735-13-1 CAPLUS
CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-[[(3S)-tetrahydro-3-furanyl]methoxy]-7-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:762992 CAPLUS
DOCUMENT NUMBER: 135:303907
TITLE: Preparation of quinazolines as inhibitors of epidermal growth factor-mediated signal transduction.
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma K.-G., Germany
SOURCE: PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077104	A1	20011018	WO 2001-EP3694	20010331
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 10017539	A1	20011011	DE 2000-10017539	20000408
DE 10040525	A1	20020228	DE 2000-10040525	20000818
AU 2001063831	A5	20011023	AU 2001-63831	20010331
EP 1280798	A1	20030205	EP 2001-938076	20010331
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JP 2003530395	T2	20031014	JP 2001-575577	20010331

PRIORITY APPLN. INFO.:
DE 2000-10017539 A 20000408
DE 2000-10040525 A 20000818
WO 2001-EP3694 W 20010331

OTHER SOURCE(S): MARPAT 135:303907
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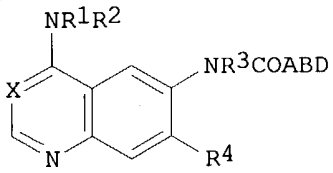
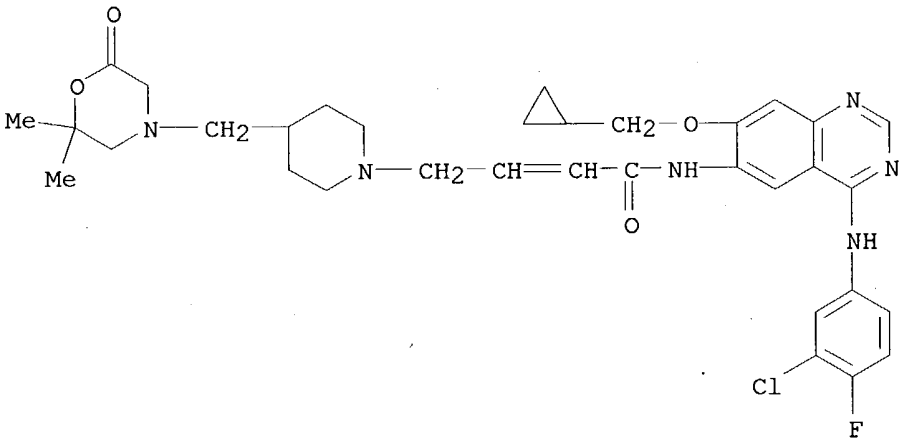


I

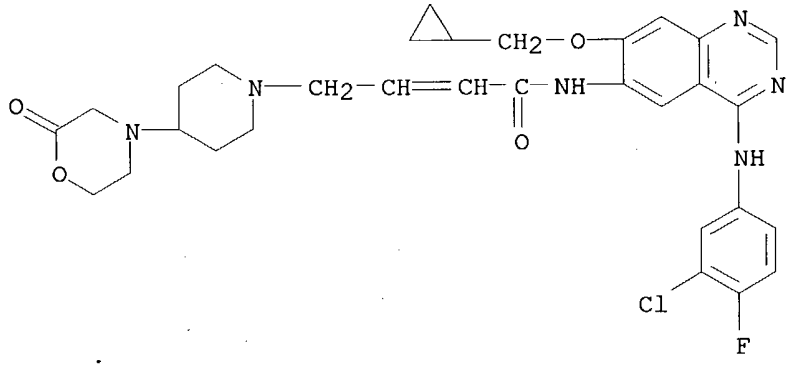
AB Title compds. [I; X = NCN, N; R1 = H, alkyl; R2 = (substituted) Ph, PhCH2, PhCH2CH2; R3 = H, alkyl; R4 = H, alkoxy, cycloalkoxy, cycloalkylalkoxy; A = (substituted) vinylene; B = bond, (fluoro)alkylene; D = substituted pyrrolidinyl, piperidinyl, piperazinyl, etc.], were prepared Thus, 4-[(3-chloro-4-fluorophenyl)amino]-6-[[4-(piperazin-1-yl)-1-oxo-2-buten-1-yl]amino]-7-cyclopropylmethoxyquinazoline (preparation given) in THF was treated with Et3N and then with 3-bromodihydrofuran-2-one in THF under ice cooling followed by stirring for 48 h at room temperature to give 56% 4-[(3-chloro-4-fluorophenyl)amino]-6-[[4-[4-(2-oxotetrahydrofuran-3-yl)piperazin-1-yl]-1-oxo-2-buten-1-yl]amino]-7-cyclopropylmethoxyquinazoline. The latter inhibited epidermal growth factor (EGF)-dependent proliferation of F/L-HERc cells with IC50 = 0.05 nM.

IT **365532-49-6P 367282-23-3P 367282-25-5P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of quinazolines as inhibitors of epidermal growth factor-mediated signal transduction)

RN 365532-49-6 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(2,2-dimethyl-6-oxo-4-morpholinyl)methyl]-1-piperidinyl]- (9CI) (CA INDEX NAME)

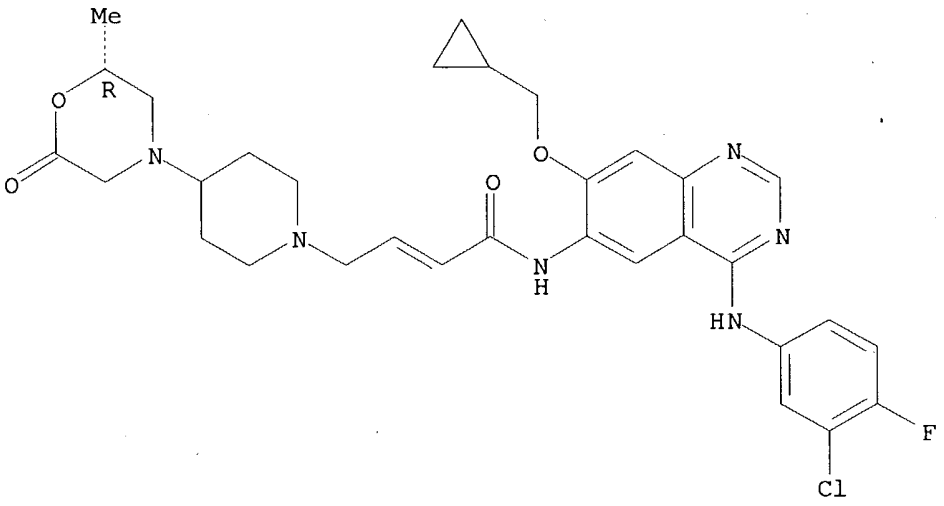


RN 367282-23-3 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-(2-oxo-4-morpholinyl)-1-piperidinyl]- (9CI) (CA INDEX NAME)



RN 367282-25-5 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(2R)-2-methyl-6-oxo-4-morpholinyl]-1-piperidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:747043 CAPLUS
DOCUMENT NUMBER: 135:303901
TITLE: Bicyclic heterocycles as inhibitors of epidermal growth factor receptor mediated signal transduction
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Blech, Stefan; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma KG, Germany
SOURCE: Ger. Offen., 28 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10017539	A1	20011011	DE 2000-10017539	20000408
US 2001044435	A1	20011122	US 2001-816003	20010323
US 6627634	B2	20030930		
WO 2001077104	A1	20011018	WO 2001-EP3694	20010331
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2001063831	A5	20011023	AU 2001-63831	20010331
EP 1280798	A1	20030205	EP 2001-938076	20010331
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003530395	T2	20031014	JP 2001-575577	20010331
PRIORITY APPLN. INFO.:			DE 2000-10017539 A	20000408
			DE 2000-10040525 A	20000818

WO 2001-EP3694 W 20010331

OTHER SOURCE(S): MARPAT 135:303901

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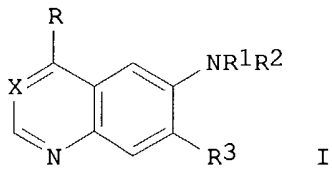

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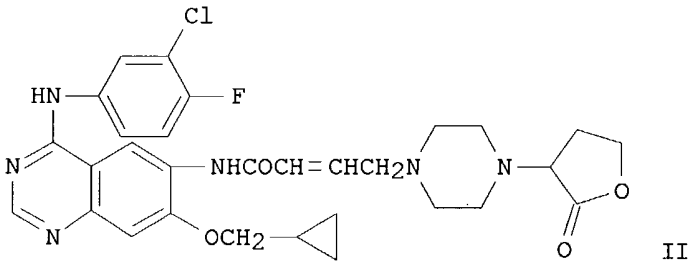


II

AB Bicyclic heterocycles I [X = N, CCN; R = substituted NH2; R1 = H, alkyl; R2 = acyl; R3 = H, (un)substituted alkoxy, cycloalkoxy, tetrahydrofuranyloxy, tetrahydropyranyloxy, tetrahydrofuranylmethoxy, tetrahydropyranylmethoxy] were prepared for use as inhibitors of tyrosine kinase-mediated signal transduction for treatment of tumors and diseases of the lung and airway. Thus, 4-[(3-chloro-4-fluorophenyl)amino]-7-fluoro-6-nitroquinazoline was treated with cyclopropylmethanol, followed by reduction to the amine, reaction with 4-bromocrotonic acid and N-tert.-butoxycarbonylpiperazine, and deblocking to give the quinazoline II. II had an IC50 for inhibition of epidermal growth factor dependent proliferation of 0.05 nM.

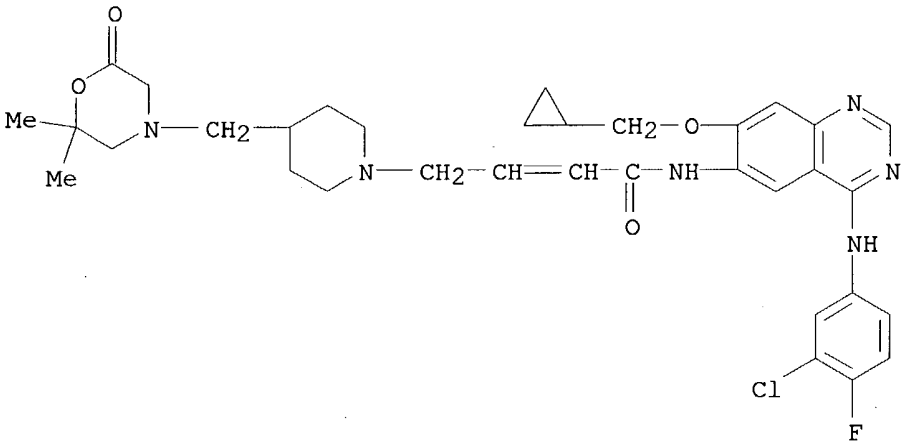
IT **365532-49-6P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of bicyclic heterocycles as inhibitors of epidermal growth factor receptor mediated signal transduction)

RN 365532-49-6 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-[4-[(2,2-dimethyl-6-oxo-4-morpholinyl)methyl]-1-piperidinyl]- (9CI) (CA INDEX NAME)



L3 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:666715 CAPLUS
DOCUMENT NUMBER: 133:252449
TITLE: Quinazolines and other bicyclic heterocycles, pharmaceutical compositions containing these compounds as tyrosine kinase inhibitors, and processes for preparing them
INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Blech, Stefan; Jung, Birgit; Metz, Thomas; Solca, Flavio
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma K.-G., Germany
SOURCE: PCT Int. Appl., 153 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

present

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000055141	A1	20000921	WO 2000-EP2228	20000314
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19911509	A1	20000921	DE 1999-19911509	19990315
EP 1163227	A1	20011219	EP 2000-909360	20000314
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000009076	A	20011226	BR 2000-9076	20000314
TR 200102782	T2	20020422	TR 2001-200102782	20000314
JP 2002539199	T2	20021119	JP 2000-605571	20000314
EE 200100484	A	20021216	EE 2001-484	20000314
NZ 514706	A	20031128	NZ 2000-514706	20000314
AU 772520	B2	20040429	AU 2000-31667	20000314
US 2002177601	A1	20021128	US 2001-938235	20010823
ZA 2001007185	A	20020621	ZA 2001-7185	20010830

BG 105893	A	20020531	BG 2001-105893		20010912
NO 2001004487	A	20010914	NO 2001-4487		20010914
PRIORITY APPLN. INFO.:			DE 1999-19911509	A	19990315
			WO 2000-EP2228	W	20000314

OTHER SOURCE(S): MARPAT 133:252449

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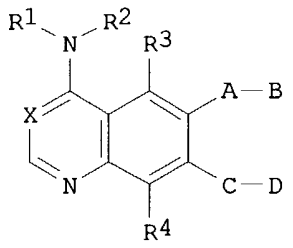

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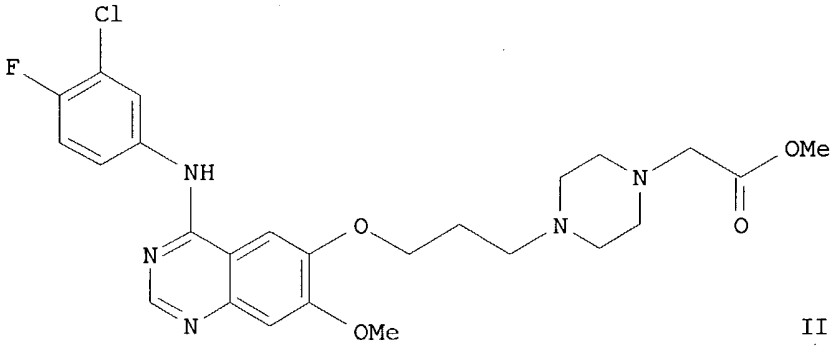


II

AB The invention relates to bicyclic heterocyclic compds. I [R1 = H, alkyl; R2 = (un)substituted Ph, CH2Ph, or CH(Me)Ph; R3, R4 = H, F, Cl, OMe, or Me optionally substituted by OMe, NMe2, NEt2, pyrrolidino, piperidino, or morpholino; X = N or C(CN); A = O, NH, (un)substituted alkylene, O-alkylene, NH-alkylene, O-cycloalkylene, etc.; B = (un)substituted amine-containing sidechain, piperazino, alkyleneimino, morpholino, etc.; or AB = H, F, Cl, alkoxy, amino, etc.; C = groups similar to A; D = groups similar to B; with a variety of provisos] and their tautomers, stereoisomers, and salts, and particularly their physiol. acceptable salts with inorg. or organic acids or bases. The compds. have valuable pharmacol. properties, particularly an inhibitory effect on signal transduction mediated by tyrosine kinases, and are useful in treating diseases, particularly tumor diseases, and diseases of the lung and airways. Over 20 compds. were prepared, and over 200 are listed. For instance, alkylation of 4-(3-chloro-4-fluorophenylamino)-6-[3-(1-piperazinyl)propyloxy]-7-methoxyquinazoline (preparation given) by Me bromoacetate gave 51% title compound

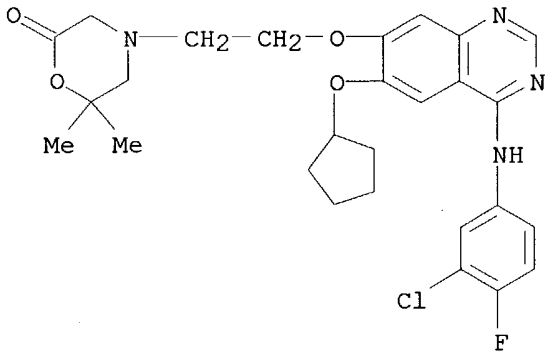
II. The latter compound inhibited EGF-dependent proliferation of F/L-HERc cells in vitro, with an IC50 of 46 nM.

IT **295330-30-2P**, 4-[(3-Chloro-4-fluorophenyl)amino]-6-cyclopentyloxy-7-[2-(6,6-dimethyl-2-oxomorpholin-4-yl)ethoxy]quinazoline
295330-32-4P, 4-[(3-Bromophenyl)amino]-6-[2-(6,6-dimethyl-2-oxomorpholin-4-yl)ethoxy]-7-methoxyquinazoline
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of quinazoline derivs. and other bicyclic heterocycles as tyrosine kinase inhibitors)

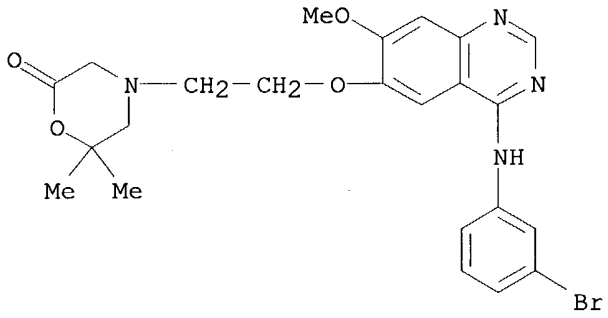
RN 295330-30-2 CAPLUS

CN 2-Morpholinone, 4-[2-[[4-[(3-chloro-4-fluorophenyl)amino]-6-(cyclopentyloxy)-7-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



RN 295330-32-4 CAPLUS

CN 2-Morpholinone, 4-[2-[[4-[(3-bromophenyl)amino]-7-methoxy-6-quinazolinyl]oxy]ethyl]-6,6-dimethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:628125 CAPLUS

DOCUMENT NUMBER: 133:207919

TITLE: Preparation of 4-amino-quinazoline and quinoline derivatives having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases

INVENTOR(S): Himmelsbach, Frank; Langkopf, Elke; Jung, Birgit; Metz, Thomas; Solca, Flavio; Blech, Stefan

PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma K.-G., Germany

SOURCE: PCT Int. Appl., 232 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

assigned only provisional

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2000051991	A1	20000908	WO 2000-EP1496		20000224
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
DE 19908567	A1	20000831	DE 1999-19908567		19990227
DE 19911366	A1	20000921	DE 1999-19911366		19990315
DE 19928306	A1	20001228	DE 1999-19928306		19990621
DE 19954816	A1	20010517	DE 1999-19954816		19991113
CA 2361174	AA	20000908	CA 2000-2361174		20000224
EP 1157011	A1	20011128	EP 2000-910695		20000224
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
BR 2000008524	A	20011218	BR 2000-8524		20000224
JP 2002538145	T2	20021112	JP 2000-602218		20000224
EE 200100449	A	20021216	EE 2001-449		20000224
BG 105765	A	20020329	BG 2001-105765		20010801
HR 2001000617	A1	20021031	HR 2001-617		20010823
NO 2001004114	A	20011015	NO 2001-4114		20010824
PRIORITY APPLN. INFO.:			DE 1999-19908567	A	19990227
			DE 1999-19911366	A	19990315
			DE 1999-19928306	A	19990621
			US 1999-149329P	P	19990817
			DE 1999-19954816	A	19991113
			WO 2000-EP1496	W	20000224

OTHER SOURCE(S): MARPAT 133:207919

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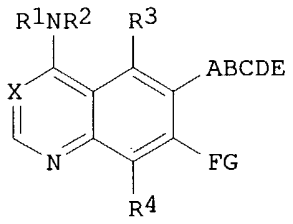

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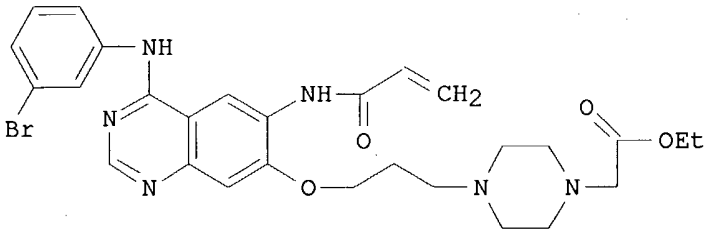


II

AB Title compds. [I; R1 = H, C1-C4-alkyl; R2 = (un)substituted Ph, benzyl, 1-phenylethyl; R3, R4 independently = H, F, Cl, CH3O, CH3OCH2, (CH3)2NCH2, (CH3CH2)2NCH2, pyrrolidino, piperidino, morpholino; X = C(CN), N; A = O, NH, (C1-C4)-alkylN; B = CO, SO2; C = 1,3-allenylene, 1,1-vinylene, 1,2-vinylene, 1,3-butadien-1,4-ylene, with CH3, CF3 substitution; D = alkylene, CO-alkylene, SO2-alkylene; CO, SO2; E = HOCO(CH2)nNR5, (HO)2P(:O)(CH2)nNR5; n = 1-6; R5 = H, alkyl], tautomers, stereoisomers, and physiol. acceptable salts are prepared and having valuable pharmacol. properties, particularly an inhibiting effect on signal transduction mediated by tyrosine kinases. Title compds. are useful for treating tumoral diseases, diseases of the lungs and respiratory tract. Thus, the title compound II was prepared and tested by Cell Titer 96TM Aqueous Nonradioactive Cell Proliferation Assay.

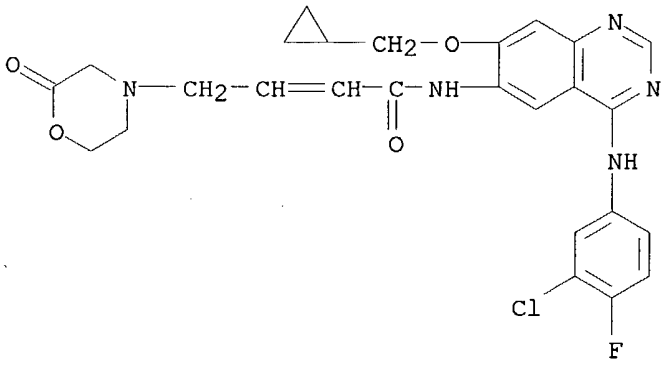
IT **290302-25-9P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aminoquinazoline and aminoquinoline derivs. having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases)

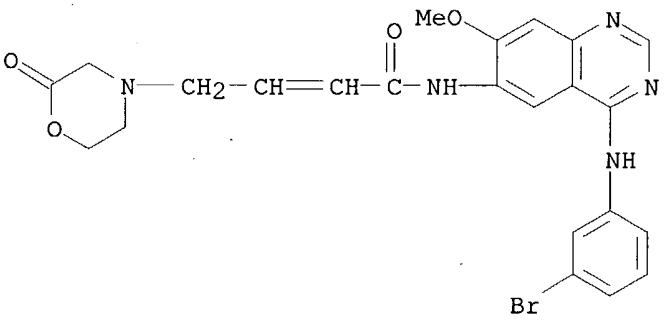
RN 290302-25-9 CAPLUS

CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)

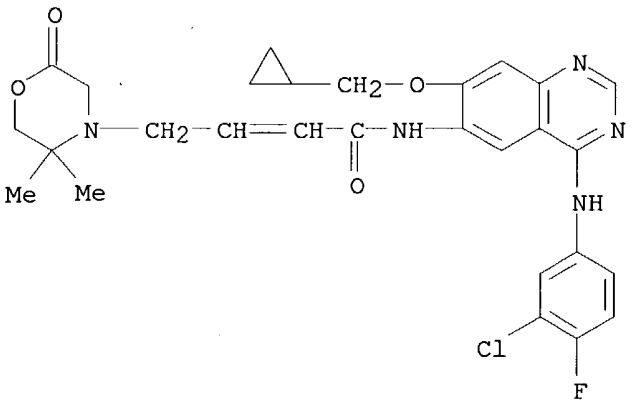


IT **290301-98-3P 290302-51-1P 290302-53-3P 290303-02-5P 290303-03-6P**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of aminoquinazoline and aminoquinoline derivs. having an inhibitory effect on signal transduction mediated by tyrosine kinases useful for treating tumoral diseases, lung and respiratory tract diseases)

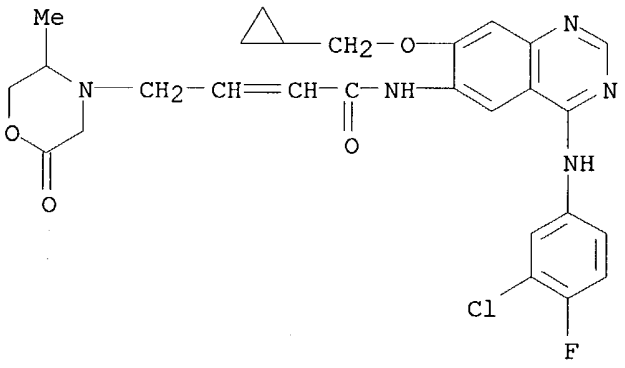
RN 290301-98-3 CAPLUS
CN 2-Butenamide, N-[4-[(3-bromophenyl)amino]-7-methoxy-6-quinazolinyl]-4-(2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



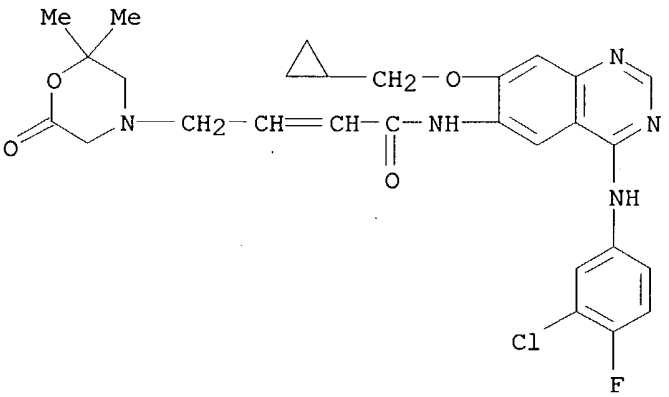
RN 290302-51-1 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5,5-dimethyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



RN 290302-53-3 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(5-methyl-2-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



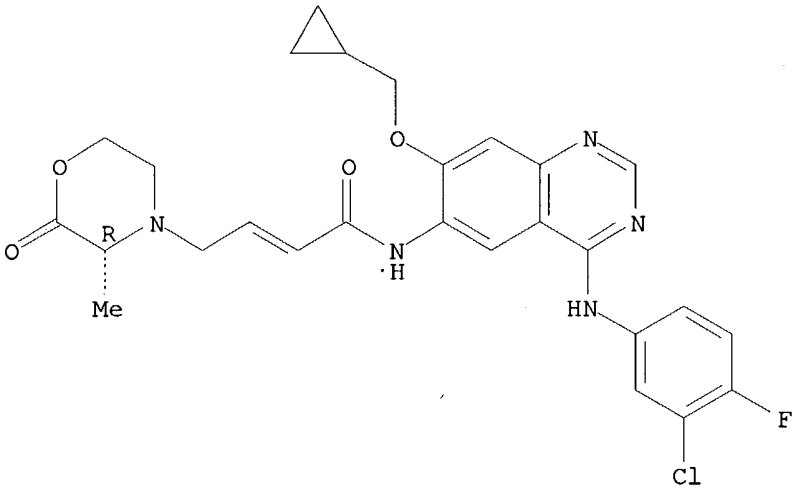
RN 290303-02-5 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-6-quinazolinyl]-4-(2,2-dimethyl-6-oxo-4-morpholinyl)- (9CI) (CA INDEX NAME)



RN 290303-03-6 CAPLUS
CN 2-Butenamide, N-[4-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethoxy)-

6-quinazolinyl]-4-[(3R)-3-methyl-2-oxo-4-morpholinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT